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THE JOURNAL OF EDUCATIONAL METHOD

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THE NATIONAL CONFERENCE ON EDUCATIONAL METHOD

An Association of Persons Interested in Supervision and Teaching

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The Journal of Educational Method

VOLUME VI NOVEMBER, 1926 NUMBER 3

EDITORIALLY SPEAKING

BRINGING UP THE REPORTERS

Nothing else so well brings out Superintendent McAndrew's generalship as his conquest of the Chicago newspapers. The habit of treating with flippancy almost everything educational seemed to be firmly fixed in the newspaper offices of the Windy City. Meetings of the Board of Education were represented as much like a free-for-all fight at an Irish fair. Public speakers at educational meetings were commonly made to appear more or less ridiculous. The reporters either couldn't or wouldn't discover what was going on. If they did, the desk men so garbled their stories that they had difficulty in recognizing them. Everything must be spicy, not to say sensational—jazzed up.

Mr. McAndrew has changed all of that. He is no mean journalist himself and knows how to reach the journalistic conscience. He called for fair play. Pointing out that the newspaper notices concerning the schools had evidently been prepared far from the scene of action, he invited the papers to send out scouts who should see for themselves just what the schools were doing. The invitation was accepted. The reporters came, saw, and were captivated. Schools now are not as they once were, they learned. Children like to go to school. Teachers are not Ichabod Cranes but decidedly modern and businesslike in all their ways.

The reports printed in the papers were complimentary, sincerely so. The reporters were surprised and delighted. The good people of Chicago will hereafter be treated to a more just and appreciative account of their most important civic enterprise. And Mr. McAndrew and the committee of teachers who helped him in the good work will no doubt enjoy life a great deal better in the future because of a more sympathetic attitude on the part of their public. Adult education pays.

THE DALLAS MEETING

The next meeting of the National Conference on Educational Method will be held in Dallas, Texas, in February, 1927. A considerable effort will be required on the part of those in the northern sections of the country to reach the convention city. Nevertheless it is hoped that a large number of persons interested in the work of the Conference will be present. Aside from the program, details of which will soon be announced, the reorganization which will take place at that time should prove of

interest. The future of the Conference will no doubt be determined by it.

DO MEETINGS PAY?

The amount of time, energy, and money now expended in carrying on various kinds of meetings of teachers in this country has become enormous. Like the members of all other organized occupations, teachers get together often. To the thoughtful observer the question is bound to suggest itself, Does all this activity pay?

Perhaps, a better phrasing would be, Does it pay as well as it might? There is obviously a lack of continuity. Each new president tends to plan something different. Above all, he wants numbers and seeks the cards that will draw them. Most who attend the meetings are passive. They listen, more or less, and receive a good deal of stimulus, but go home with little that is definite. There surely is lack of perspective and balance.

Curiously enough, teachers' meetings are almost wholly in the hands of amateurs. The philosophy and technique of meetings have been but slightly touched upon in educational writing. Few have made any special study of either. No standards or qualifications for leadership of meetings is generally recognized. This aspect of professional training has, as compared with teaching, been almost completely ignored. At most it has been touched upon in general courses in supervision and the work of principals. The time for scientific study and systematic training in the art of planning and conducting educational meetings would seem to be ripe.

J. F. H.

A CONDUCT SCALE FOR THE MEASUREMENT OF TEACHING

ELLSWORTH COLLINGS
Dean, School of Education, University of Oklahoma

I. THE POINT OF VIEW

This scale is founded upon six interrelated ideas of teaching. First, life is interpreted as purposeful activity. "Whether we look or whether we listen, we hear life murmur or see it glisten." It may be the songs of the birds, the joyous notes of the insects, or the glories of the field. The child is no exception. It is a beautiful illustration. Purposeful activity is its very essence. It may be, for example, communicating things, finding out things, playing with things, or constructing things. In any event, the bent is to do something—to create, to make, to discover, to reach onwards. Second, purposeful activity is considered in its analytical aspects as the response of boys and girls along their drive in the initiation of goal, evaluation of goal, choice of goal, initiation of means, evaluation of means, choice of means, organization of means, execution of means, initiation of improvement, evaluation of improvement, choice of improvement, consummation of improvement, and leading to further goals. It is interpreted as a "complete act" involving the response of children along their drive in all its component parts. Third, growth is interpreted as continuous change in children's drive and response along the traits of purposeful activity, as, for example, change in drive and response in initiation of goal. It is change in children's conduct. Fourth, education is conceived as changing the drive and response of children along the traits of purposeful activity. It is a process and takes place through purposeful activity. It takes place through children responding along their drive in the traits of purposeful activity. Fifth, teaching is interpreted as stimulating and directing the purposeful activities of boys and girls. It is, on the one hand, providing stimuli capable of arousing children's response along their drive in the traits of purposeful activity, and, on the other hand, seeing that success attends children's response along their drive in these traits. It, too, is a process. Sixth, it follows the efficiency of teaching, is revealed through measuring the extent of functioning of children's response along their drive in the traits of purposeful activity, for drive is a measure of the appropriateness of stimulation and response direction. This demands a conduct scale—a scale measuring quantitatively the response of children along their drive in the traits of purposeful activity.

II. PURPOSE OF SCALE

The extent of the functioning of children's response along their drive in the traits of purposeful activity is, as we have seen, the measure of the efficiency of teaching. The chief purpose of this scale is to enable the teacher to grow continuously in ever increasing the extent of the functioning of children's response along their drive in these traits. It seeks to accomplish this end through two uses. First, the scale seeks to reveal teaching difficulties. It is, in this sense, a diagnosis scale. It reveals particular difficulties in stimulating and directing the purposeful

activities of boys and girls. It indicates, in this particular, lines of teacher growth. Second, the scale seeks to reveal improvements of teaching. It is, in this sense, a prognosis scale. It reveals particular improvements in the teacher's stimulation and direction of the purposeful activities of children. It indicates, in this particular, growth of the teacher in guiding the purposeful activities of boys and girls. The purposes, in brief, are:

1. Primary purpose: to enable the teacher to grow continuously in stimulating and directing the purposeful activities of boys and girls.
2. Secondary purpose: to reveal teaching difficulties in stimulating and directing the purposeful activities of boys and girls.
3. Secondary purpose: to reveal teaching improvements in stimulating and directing the purposeful activities of boys and girls.

III. CONTENT OF SCALE

1. *Scale.* See opposite page for a copy of the scale.

2. *Traits.* The scale includes the traits of purposeful activity. They are indicated vertically at the top of the scale. They represent a unit of child activity—a "complete act."

3. *Drive and Response.* The scale includes the drive and response of each trait. They are indicated horizontally at the left side of the scale in the form of "D" and "R." The Drive (Law of Readiness) indicates the readiness of children to respond along the traits of purposeful activity, and is a measure of the teacher's stimulation, for Drive (voluntary response) depends upon appropriateness of stimulation. The Response (Law of Exercise) indicates children's participation along the traits, and is a measure of the teacher's direction, for successful response depends upon appropriateness of aid in overcoming difficulties arising in the pursuit of an enterprise. The Drive and Response are, in this sense, measures of the teacher's efficiency in stimulating and directing the purposeful activities of boys and girls.

4. *Form.* The scale includes space for each child's name, name of teacher, name of school enterprise, date, grade, scores for each trait, total drives, total responses, Drive Index, and Response Index.

IV. USE OF SCALE

1. *General Direction.* Select for measurement a particular school enterprise, whether short (half-hour) or long (week or month); whether individual or group; whether inside or outside of school; whether old-fashioned or new. Fill in the names of the children, teacher, school enterprise, date, and grade. Visit the schoolroom in question and score each child's drive and response with a tally mark under appropriate traits at the time they are made. Total the drives and responses for each child and compute the drive and response indexes from the totals. Study the drive and response index of each child and make an inventory of teaching difficulties. Improve teaching according to the teaching difficulties revealed. Rescore the same or similar enterprise at intervals. The final drive and response indexes minus the initial—a magnitude which can be expressed quantitatively—is a measure of the improvement of teaching.

2. *Scoring Response.* Response is the participation of a child in carrying forward an enterprise. It is seen in a child's overt participation in the initiation, evaluation, and choice of goal; initiation, evaluation, and choice of means; organization of means; execution of means; initiation, evaluation, choice, and consummation of improvement; and leading to further goals. Count each response with a tally mark opposite the child's name under the appropriate trait. The sum of the responses

A CONDUCT SCALE

Activity.....
Teacher.....
Grade.....
Date.....

| PUPILS | | |

(each response counting one) is recorded opposite the child's name in the column labeled "Total Responses." The method of scoring response is the same for both individual and group activity.

3. *Scoring Drive.* Drive is voluntary participation on the part of a child in carrying forward an enterprise. It is seen in the voluntary character of a child's responses in the initiation, evaluation, and choice of goal; initiation, evaluation, and choice of means; organization of means; execution of means; initiation, evaluation, choice, and consummation of improvement; and leading to further goals. Count each drive with a tally mark opposite the child's name under the appropriate trait. The sum of the drives (each drive counting one) is recorded opposite the child's name in the column labeled "Total Drive." The method of scoring is the same for both individual and group activity.

4. *Drive Index Formula.* The Drive Index is obtained by dividing the total number of the child's drives (voluntary responses) by the total number of its responses made in carrying forward an enterprise. It expresses the ratio of the child's voluntary and involuntary responses. The formula is:

$$\text{Drive Index equals } \frac{CD}{CR}$$

(CD is symbol for Child Drive and CR is symbol for Child Response.)

This formula is applicable to both individual and group activity. The following illustrates the method for computing the Drive Index. Suppose Carl's score card shows a total of 300 drives in making, say, a rabbit trap, and a total of 300 responses made in completing the trap. His Drive Index equals the drives divided by the responses, or 300 divided by 300, or 100. Carl's Drive Index indicates that he is in a state of readiness to pursue the enterprise in question. It indicates furthermore, that the teacher's stimulation is appropriate.

The Drive Index may be computed for any particular trait, selected combination of traits, or all traits of purposeful activity.

5. *Response Index Formula.* The formula for computing the Response Index differs for individual and group activity. The formula for each is as follows:

(a) *Response Index Formula for Individual Activity.* The Response Index for individual activity is obtained by dividing the responses actually made by a child by the total number of responses made in carrying on an individual activity. The total number of responses is obtained by adding the number of responses made by all participants (usually the child and teacher) engaged in an individual activity. The Response Index expresses the ratio of responses made by a child to the total responses necessary in successful consummation of an individual activity. The formula is:

$$\text{Response Index equals } \frac{CR}{CR + TR}$$

(CR is symbol for Child Response and TR is symbol for Teacher Response.)

The following illustrates the method for Computing the Response Index for individual activity. Suppose Carl's score shows he made 500 responses in making, say, a snow sled, and that the total number of responses made is 500. His Response Index equals 500 divided by 500, or 100. Carl's Response Index indicates that he made all of the responses needed in carrying forward the enterprise in question. It indicates, furthermore, that the teacher's direction is appropriate.

The Response Index may be computed for any particular trait, selected combination of traits, or all traits of individual activity.

(b) *Response Index Formula for Group Activity.* The Response Index for group

activity is obtained by dividing the responses actually made by a child in a group activity by the Mean Group Response made by all participants in the group activity. The Mean Group Response is obtained by dividing the sum of the responses made by the number of participants (usually children and teacher). The formula is:

$$\text{Response Index equals } \frac{CR}{MR}$$

(CR is symbol for Child Response and MR is symbol for Mean Group Response.)

The following illustrates the method for computing the Response Index for group activity. Suppose John made 100 responses in a group activity, say, playing Roly Poly, Mary 50, Carl 150, Bill 100, and Tom 100. The mean group response is 100.

$$\text{John's Response Index equals } \frac{100}{100} \text{ or } 100$$

$$\text{Mary's Response Index equals } \frac{50}{100} \text{ or } 50$$

$$\text{Carl's Response Index equals } \frac{150}{100} \text{ or } 150$$

$$\text{Bill's Response Index equals } \frac{100}{100} \text{ or } 100$$

$$\text{Tom's Response Index equals } \frac{100}{100} \text{ or } 100$$

John's, Bill's and Tom's Response Indexes indicate they did their share of the response in carrying forward successfully the enterprise in question. Mary's Response Index indicates she did only one-half of her share of the work in this instance. Carl's Response Index indicates he did one-half more than his share of the work in question. These indexes indicate the teacher's direction is appropriate with the exception of one case. Mary's Response Index indicates difficulty on the part of the teacher in directing her response.

The Response Index may be computed for any particular trait, selected combination of traits, or all traits of group activity.

V. TECHNICAL STATUS OF SCALE

The results presented here are only tentative since they are based upon one experimental study [1] of the scale entending over a period of one year with a group of ninth grade boys and girls in the Training School, University of Oklahoma.

1. *Reliability of Scale.* The reliability of separate traits of the scale is as follows:

Traits	Coefficient of Correlation	Probable Error
Initiation of Goal	.83	.05
Evaluation of Goal	.71	.08
Choice of Goal	.61	.11
Initiation of Means	.70	.07
Evaluation of Means	.80	.05
Choice of Means	.81	.05
Organization of Means	.80	.05
Execution of Means	.65	.09
Initiation of Improvement	.63	.08
Evaluation of Improvement	.79	.06
Choice of Improvement	.69	.07
Consummation of Improvement	.58	.11
Leading to Further Goals	.40	.12

These coefficients of reliability were lowered, perhaps due to several variables arising during the study, including the following:

a. Absence of a child in a given trait in one enterprise and present during the same trait in another enterprise.

b. Assignment by the group of an important part to a certain child in one enterprise and a minor part to the same child in another enterprise.

c. Uneven guidance on the part of the teacher—perhaps unconsciously—which resulted in continued recognition of the same child in responding at the neglect of another child.

[1] Crosby, Genevieve, *The Reliability, Objectivity, and Usability of a Conduct Scale for the Measurement of Teaching.* Master's Thesis, University of Oklahoma, 1926.

d. Difference in the nature of the school enterprises. This would often cause one to have, for example, greater "leading on" qualities than another.

2. *Objectivity of Scale.* The objectivity of the evaluation traits were studied in this instance since they were considered less objective than the other traits of the scale. The coefficient of correlation and probable error for each of these traits for four independent scorers (A, B, C, D) are as follows:

Scorers	Traits	Coefficient of Correlation	Probable Error
A-B	Evaluation of Goal.....	.94	.02
A-B	Evaluation of Means.....	.98	.01
A-B	Evaluation of Improvement	.91	.03
A-C	Evaluation of Goal.....	.95	.02
A-C	Evaluation of Means.....	.98	.01
A-C	Evaluation of Improvement	.91	.03
A-D	Evaluation of Goal.....	.96	.01
A-D	Evaluation of Means.....	.99	.00
A-D	Evaluation of Improvement	.75	.07
B-C	Evaluation of Goal.....	.97	.01
B-C	Evaluation of Means.....	.97	.01
B-C	Evaluation of Improvement	.78	.06
B-D	Evaluation of Goal.....	.98	.01
B-D	Evaluation of Means.....	.99	.00
B-D	Evaluation of Improvement	.95	.02
C-D	Evaluation of Goal.....	.96	.01
C-D	Evaluation of Means.....	.98	.01
C-D	Evaluation of Improvement	.92	.02

The high correlation of the evaluation traits, which seem less objective than the other traits, indicates that this scale can be used by different scorers with high agreement of results. This high correlation of independent scorers seems to indicate a high degree of objectivity.

3. *Usability of Scale.* This study indicates that intensive and extensive training is not necessary in order for teachers to use this scale. It was found that the average inexperienced teacher can in ten days (one hour each day) become proficient in its use in classrooms. The results of this study were obtained by four inexperienced teachers after having had this amount of preliminary training. This would seem to indicate a high degree of usability.

VI. VALUE OF SCALE

The chief value of this scale is its dynamic effect upon teachers. It is an instrument of teacher growth. A teacher can use the conventional standardized test a lifetime without learning how to guide the activities of boys and girls. These tests indicate, at most, whether boys and girls can reproduce certain prescribed facts within a prescribed time limit. They do not reveal to the teacher particular difficulties in guiding the process of growing in boys and girls, nor do they indicate particular improvements in the process of teaching. They have very little, if any, value in diagnosing and improving the actual process of teaching. This scale seeks to enable the teacher, through its use, to grow continuously in the process of teaching. Determining the presence or absence of the traits of purposeful activity in children's conduct in carrying forward a particular school enterprise, why some children respond along particular traits and others do not, why one teacher succeeds in guidance and another fails, the amount of change in children's drive and response along the traits over a certain period, give to the teacher an insight into the process of growing in boys and girls. It leads the teacher to see school enterprises in terms of "complete acts" and to appreciate and utilize children's drives and responses in carrying forward such enterprises. It, in a word, introduces the teacher to the psychology of the process of growing in boys and girls. The chief value of this scale, therefore, is its use as

a means to continuous teacher growth in guiding the purposeful activities of boys and girls. It helps the teacher to analyze her teaching in terms of the natural process of growing in boys and girls, and, in so doing, reveals to her difficulties and improvements of teaching. It makes teaching itself purposeful activity. And the teacher grows, like the pupils, through purposeful activity. This is fundamental, for a fossilized teacher is an impossibility with growing boys and girls.

A PRACTICAL SCHOOL HEALTH PROGRAM

DANIEL J. KELLY
Superintendent of Schools, Binghamton, New York

Fourteen years ago the educational organization of Binghamton was much the same as that of other well-to-do, self-satisfied communities. The school curriculum was unbalanced, heavy with academic subjects, and almost destitute of vocational or health activities, and, in fact, of all other activities through which the child actually acquires life experiences.

Though we may have used slightly different terms in stating it, we then believed as we still believe the great aim of education to be *social efficiency*. The phases of social efficiency which must be our main objectives if we are, through education, to attain this goal of social efficiency have been set up as follows:

I. The vital or physical.
II. The vocational.
III. The avocational (profitable use of leisure).
IV. Civic.
V. Moral or religious (ethical character).

These are to be measured in terms of knowledge, habits, skills, attitudes.

Our problem fourteen years ago was to round out a most one-sided program to meet the life needs of our 7,000 pupils. No special attention was being given either to physical growth and development or to vocational training other than scholastic knowledge, and the child's training in citizenship and ethical character was decidedly not of the self-activity type.

Lock-step methods of instruction prevailed in the elementary schools. There was no differentiation of courses, no systematic effort to advance health standards, and no segregation of the physical or mental misfits. Naturally the instructional and disciplinary problems under these conditions were numerous and serious. It was clear that we must not only change our courses of study and our methods of instruction, but we must bring to the child the experiences which would best fit him for "successful participation" in later life activities—which would enable him to attain to his highest possible degree of social efficiency.

Being strongly convinced that the one subject which would make the greatest contribution to the child's physical, mental, and social development was health education, our first decisive step was to introduce that subject. By health education we mean such health knowledge, habits, and attitudes as result not only in greater vital or physical efficiency with a proportionate increase in vocational efficiency but which provide for a more pleasurable and

profitable use of leisure, and contribute as no other one subject can do to character training and citizenship. Because of the large percentage of children handicapped in their physical and mental development by remediable defects, the logical starting point for an organized school health program was what was then called "medical inspection." This consisted chiefly of the "routine" physical examination by the school physician; follow-up of notified defects by the school nurse; health inspection by teachers, nurse, and physician; home calls by the nurse; vaccination of all children registered in the public schools; and a little clinic work for the indigent. The special staff by whom this work was begun consisted of one part-time physician and one experienced, registered nurse with teacher training. The latter acted as supervisor of "physical welfare," as this department was then termed. Another physician and several nurses were added during the course of a few years.

The foundation then laid has never had to be undone. Year by year, our school health service has developed and our program has been expanded. Our opinions as to the essential things have in some ways changed, but our initial efforts have proven themselves fundamentally sound.

Immediately following the introduction of medical inspection, physical education was given its regular place in the curriculum. The school day was extended to provide in the elementary schools for two recreation periods daily, a thirty-minute period of supervised organized play out-of-doors and a fifteen-minute period of supervised free play. Four two-minute periods for setting-up exercises were introduced at the same time. All of this work in the elementary schools was placed in the hands of the classroom teacher, who was instructed, guided, and directed by a supervising specialist. In the high school two gymnasium periods each week in charge of a boys' and girls' physical instructor were required of all students.

During the early days of our organized program, classroom instruction in health knowledge was still to a greater or less extent the traditional type of study of physiology and hygiene. Under direct supervision great strides have since been made in the vitalizing of our health teaching.

As the various phases of health education have been introduced, they have been coördinated and placed under unit supervision. An administrative director, known as the Director of Health Education, is responsible for the coördination of all school health activities. With the approval of the Superintendent of Schools, she outlines, promotes, and is responsible for the general health education program for the entire system. Her work in the schools is carried on largely through the department heads of her own staff and the principals. This should not, however, be interpreted to mean that she does not, as occasion frequently requires, work with many teachers and children as well as all members of the health staff as individuals.

The persons responsible for the technique of each phase of health education are the specialists in that field. To illustrate: Hygiene and physical specialists are responsible for courses of study, subject matter, and methods used by the teachers of their subjects, while it is the province of the administrative director and the principal to make this work function in the schools. The paths of specialists and teachers should be so cleared of unnecessary difficulties and obstacles as to admit of the most effective use of their special knowledge, training, and skill. The same principle applies to the work of physicians, dentists, nurses, hygienists. With due recognition of and deference to the rights

of *other* directors of instruction, the way for the work of all health specialists in the schools must be well paved to avoid loss of time, confliction, and waste of effort. The administrator of a school health program should know schools from the "inside out" and from the "outside in."

The work is coördinated (1) by means of group health conferences and general health staff conferences. At the former, the special aims, problems, and results of a certain line of work are discussed; at the latter, the work of all departments is discussed that all staff members may understand something of the aims and accomplishments of other specialists. This is essential to complete coördination. As a result of such understanding and unity of purpose, problematic cases are referred through the Director from one department to another for special study or treatment; for example, physical to medical or medical to physical; (2) by means of frequent conferences with school principals or teachers.

Our present school population numbers about 13,000 children in the public schools and 2,000 in the parochial schools. The pupils of the latter schools are offered everything in the way of school health service, both medical and dental, which is provided for our public school children. Other phases of health education are not, however, carried into the parochial institutions. The special health staff which carries on the work of health education in Binghamton at the present time consists of the administrative director, a secretarial assistant, three part-time school physicians, one part-time eye, ear, nose, and throat specialist, one part-time orthopedic specialist, one part-time dentist, seven full-time nurses, three full-time oral hygienists, one hygiene and nutrition supervisor, two physical specialists for elementary school supervision, and five instructors of physical education in the secondary school, one of these being the department head.

The program as it is now in operation may be briefly outlined as follows:

I. School health supervision.
  A. Medical service.
    1. For pupils.
    2. For teachers—health examinations and preventive treatment.
    3. For custodians and all other employees of the Department of Education—health examinations and preventive treatment.
  B. Dental service.
    1. For pupils.
    2. For teachers—prophylactic only.
  C. Disease prevention.
  D. Health supervision of special classes.
    1. Crippled children.
    2. Open air.
    3. For the mentally defective.
    4. Conservation of sight—pending.
  E. Sanitary inspection of school plants.
II. Physical education.
  1. For pupils of
    a. Elementary schools.
      1. Required.
      2. Extra-curricular.
    b. High school.
      1. Required.
      2. Extra-curricular.
  2. For teachers.
III. Health instruction.
  1. Supervised teaching of hygiene and nutrition from kindergarten through the eighth grade.
  2. Health teaching through the basic subjects in the secondary school.
  3. Correlations.
IV. Mental, emotional, and social health. Extra-curricular activities, etc.
V. Training of teachers in service.
VI. Summer playgrounds.

School health supervision, as the term is used in the Binghamton schools, is far removed from the routine "medical inspection" of only a few years ago. Today

it means the coöperation of pupil, parent, teacher, physician, and nurse in raising the standard of health among the youth of our city. For the great majority of boys and girls this work is chiefly preventive, emphasis being placed upon those habits and activities which shall strengthen them physically, mentally, morally, and socially. For the student who is physically below standard, however, it means a study of his individual health problem and advice concerning its treatment by the home physician or specialist. This individual health supervision does not mean treatment by the school medical authorities except under certain special circumstances. It offers first aid in cases of accident or sudden illness at school; corrective treatment for indigent boys and girls; and the treatment of minor injuries and illnesses for which a family physician would not be employed but which hinder a pupil's attendance.

The place in the school health program of such supervision, both corrective and preventive, is established, first, from the standpoint of the child, who is being granted his inherent right to his greatest possible opportunity for growth, development, and *social efficiency;* second, from the standpoint of financial economy: the correction of physical defects, improvement of general health conditions, and the prevention of disease not only produce a higher percentage of school attendance but greatly increase the ability of any group to accomplish desired results, thus lowering the percentage of non-promotion and expensive repetition; third, from the standpoint of the school system, where it is recognized that, for the welfare of all, and for the attainment of desired educational aims, the problem of the physically handicapped child, with the resultant problems of instruction and citizenship, should be reduced to its lowest terms.

It is quite impossible and certainly unnecessary here to explain in detail the field covered by our school health supervision. However, that it may clearly be understood what part our physicians, nurses, dentists, and hygienists are performing in our task of educating the *whole child,* we shall merely enumerate the major activities of this branch of health education.

The general program of school health supervision:

One or more inspections by the school physicians of all pupils in all public and parochial schools.

A careful physical examination, each year, of certain groups or grades of children in all public and parochial schools of the city, this more thorough examination taking the place of the "routine" examination of all children each year.

A careful examination of all pupils newly registered.

A special examination by the school physician for all prospective members of high school athletic squads.

A special examination by the school physician of certain elementary school pupils as a requisite for athletic participation.

A special, rather thorough physical examination by the school physician of all members of the high school senior class who wish to avail themselves of the opportunity for such examination.

Another phase of our positive health teaching is instruction in hygiene and nutrition. In the elementary schools, from the kindergarten through the eighth grade, progressive courses of study are followed in these two branches. Special supervision is given by a highly qualified specialist who prepares courses, demonstrates methods, and supervises class instruction; and the teacher is guided by group and individual conferences as well as classroom observation.

In the elementary school program, twenty minutes per week in the kinder-

garten and the first three grades, and fifty minutes per week for all grades above the third, are allotted to classwork in hygiene and nutrition. These periods as stated do not include a required five-minute period daily for checking of health habits and one weekly individual instruction and weighing period for all children 10 per cent or more underweight.

The early health education materials of the U. S. Bureau of Education, the American Child Health Association, and the Metropolitan Life Insurance Company brought a great inspiration and an entirely new life to our classroom health instruction. To these organizations we shall always feel grateful. For several years past, while we have gradually supplied each teacher with the best that can be procured in the way of a health library for her desk, we have drawn upon our own resources for a great majority of our supplementary materials. While we strongly urge a definite place for health instruction in every school program, we nevertheless realize that some of our most effective health teaching is that done through correlations with English, art, music, nature study, geography, history, penmanship, and other subjects.

In the secondary school all group health instruction, except that carried on in connection with physical education, is given through the basic courses in biology, civics, and home economics. Our alert teachers find also many opportunities for the correlation of health with composition and literature, dramatics, public speaking, the social sciences, chemistry, and, in fact, with practically every subject.

Mental, emotional, and social health. To no great extent have we thus far used group mental tests. Individual mental tests are administered by a trained examiner and problematical mental cases are referred by our physicians and examiner to the mental clinics held very frequently in our city.

As a factor in social adjustment, mental and moral poise and stability, especially during the adolescent period, we consider our program of extra-curricular activities of the greatest possible value. Those of the athletic type have already been discussed. Others of inestimable value are student organizations, dramatics, debating, musical, editorial, literary, art, and nature study clubs. In one or more of these self-directed groups with faculty members, every high school student should find not only an immediate but a "carry-over" interest.

Training of teachers in service. To meet the need of a great number of teachers, our health specialists have given evening normal courses in various phases of health teaching. Many of our teachers have lacked sadly the training needed for the teaching of health; but through the normal courses offered by our specialists, they make up that deficiency, and add to their confidence, self-assurance, and successful achievement in the classroom. Hundreds of teachers have demonstrated their appreciation of this opportunity. During the present semester fully 90 per cent of our two hundred eighty-eight teachers of nutrition, and approximately an equal percentage of those teaching girls' physical education, are attending the evening normal courses in those subjects.

Summer playgrounds. No system of health training which leaves the child to his own devices for two months during the summer is completely fulfilling its obligations. During that period especially, the child needs to know the joys of directed motor activity, a need to which the playground, supervised by honest, enthusiastic leaders, is the answer.

We have maintained school summer playgrounds for a long period, but during the

last two years the summer recreational program has been made an "extension," so to speak, of the regular physical and handwork programs. The work is carefully planned, and the staff is made up almost entirely of experienced teachers with special qualifications for playground work. In congested districts, school plants and school grounds are used for play centers.

Someone asks the cost of health education in the Binghamton schools. Inasmuch as little overhead can be charged to health education alone, this item has not been taken into consideration. The total cost per day per child for all special health supervision, the supervision of all physical education in the elementary schools, the regular physical education program in the high school, supervision of instruction in hygiene and nutrition, and all school summer playgrounds is approximately $.016. By state subsidies this figure is so reduced that the part to be raised by local taxation is $.012.

"Putting over" even a practicable school health program is not a one-man job. Though one man must assume the responsibility of finding its place in the curriculum and firmly putting it in its place, and while the same one man must give every special worker the necessary administrative support, and while one person must see that the program functions properly, satisfactory results can be achieved only through the enthusiastic, conscientious effort of every person concerned with the life of a child in school. The best work of all must be so unified that it shall be like the work of one, whose highest purpose is to guide healthy, happy, buoyant childhood into socially efficient adulthood.

ADAPTATION OF THE INTENSIVE PLAN OF ELEMENTARY SCHOOL ORGANIZATION TO MEET PRESENT DAY AIMS[1]

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The intensive plan has in it interesting possibilities. Its principal advantages are: (1) it provides for intensive work in subjects like manual training, sewing, art, and cooking; (2) it relieves regular teachers of teaching all but one or two of the special subjects; and (3) it provides for the enriched curriculum and for the efficient teaching of special subjects without at the same time making necessary a complicated and cumbersome school organization. By modifying the plan we may extend it to meet various situations.

Certain lines of work in the primary grades might be improved by taking advantage of whatever special abilities the regular teachers possess. Also further enrichment of the curriculum is made possible by organizing upon the plan mentioned. (The current notion of enriching the curriculum is to add subjects, but it may be better to enrich the teaching of each subject already in the curriculum: we are not discussing this point.) In addition, this plan lends itself to giving able teachers time for supervising the work of less able teachers, and to preventing part time when there are in a building more classes than there are classrooms. Schedules will be offered to show how each of these objectives may be attained.

In the primary grades the time allotment for manual training (paper folding, pasting, cutting, etc.) and for drawing is usually about an hour a week each, and for penmanship and music about fifteen minutes a day each. Hence, four primary grade classes may be grouped together an hour a day so that the four teachers will each teach just one of these subjects, but each will teach her special subject to all four classes.

The schedule below provides for this particular situation.

1:00–2:00

<table>
<tr><th></th><th>2B[1]</th><th>2B[2]</th><th>2A[1]</th><th>2A[2]</th></tr>
<tr><td rowspan="4">1st Cycle
and
3rd Cycle</td><td rowspan="2">Manual Training
Miss A——</td><td>Penmanship
Miss C——</td><td rowspan="2">Drawing
Miss B——</td><td>Music
Miss D——</td></tr>
<tr><td>Music
Miss D——</td><td>Penmanship
Miss C——</td></tr>
<tr><td>Penmanship
Miss C——</td><td rowspan="2">Drawing
Miss B——</td><td>Music
Drawing
Miss D——</td><td rowspan="2">Manual Training
Miss A——</td></tr>
<tr><td>Music
Miss D——</td><td>Penmanship
Miss C——</td></tr>
</table>

[1] For the author's introductory article on "The Intensive Plan of Elementary School Organization," see the October number of this JOURNAL.

According to this schedule, manual training and drawing are each taught in half-hour periods, while penmanship and music are each taught in fifteen-minute periods. Consequently the manual training and drawing teachers will each teach two classes during the hour, while the other two teachers will teach all four classes during the hour. The teachers, not the children, should change rooms and the four rooms should be within easy reach of one another so that no time will be lost in changing. Only the program for the first and third cycles is shown in the above diagram, but the program for the second and fourth cycles is easily determined, for the 2B[1] and 2B[2] classes and the 2A[1] and 2A[2] classes simply exchange programs at the end of each cycle.

Besides securing the advantages of specialization, we secure also the advantage of preventing either the neglect of, or the over-emphasis of, any of these particular subjects. Just fifteen minutes a day is given to music, for illustration. The music cannot receive less than its allotted time. On the other hand, a teacher cannot give more than the required time, as is frequently done when a plan like this is not employed. In order to please supervisors, teachers sometimes "steal time" from the regular subjects and devote it to meeting the demands of the supervisors of special subjects. Still another advantage of this arrangement is that supervision of special subjects is made easier and is rendered less necessary, for there is only one-fourth the number of teachers teaching any one special subject and each of these is expert, or will soon become expert, in her special field. A good course of study in each special subject, plus a school principal that is moderately efficient, should be ample provision for obtaining satisfactory results in the special subjects.

The program just described may be variously modified. Subjects other than those mentioned may be included in the schedule. Should each teacher prefer to teach penmanship to her own class, then hygiene, spelling, dramatics, or some other subject may be substituted for penmanship. Or, the intensive feature may be omitted and only the departmentalization feature introduced. For illustration, four teachers may interchange their classes daily one hour a day for music, hygiene, spelling, and penmanship, each teacher teaching one subject fifteen minutes to each of four classes. Also, more or fewer than four classes may be grouped together for special work, and the daily time for work on the intensive plan may be made more or less than an hour, all depending upon the conditions to be met or results to be achieved.

One way of enriching the curriculum, some believe, is to add subjects to it, and the intensive plan offers an effective way of doing this without overcrowding the curriculum or without complicating the school machinery. Let us suppose that we

11:30–12:00

	2B[1]	2B[2]	2A[1]	2A[2]
1st Cycle	Dramatics Miss A——	Safety First Miss B—— / Hygiene Miss C——	Poetry, or Nature Study, or Civics Miss D——	Hygiene Miss C—— / Safety First Miss B——

wish to introduce "safety first" instruction and dramatics into the second-grade program of studies, and to give to each new study half as much time as is usually given to penmanship or drawing. This may be done by teaching these two subjects along with two others already in the curriculum, on the intensive plan. By letting one teacher handle the "safety first" work and another the dramatics, we are certain that each subject will receive its allotted share of time and are reasonably sure that each will be properly taught. The schedule may appear like the one shown on the opposite page.

Such a program is suitable for a school not provided with an auditorium. For a half hour a day the four classes designated pursue this program for the first quarter (cycle) of the term. The program changes for each of the three remaining cycles so that at the end of the term each class will have had all the courses scheduled: that is, one cycle (5 weeks) of dramatics, two of safety first and hygiene (15 minutes a day each), and one of poetry, or whatever other study one may assign. In like manner one may add to the curriculum some of these subjects: kindness to animals, etiquette, character training, elocution, care of plants, respect for the flag, ceramics, or any particular phase of a regular school subject upon which emphasis is desired. Two of these special lines of work might be incorporated in the work of the first grades, two in the second, and so on, with the result that each item would be regularly taught at some one point in the elementary course. Only fifteen minutes extra time each day would be required for this work, but it would not be necessary to lengthen the school day on this account; for this time might be saved by a more economical arrangement of the program. Also, these subjects usually form a part of the school activities anyhow, but they are taught incidentally and are not regularly programmed. And, unfortunately, they are sometimes neglected. To stress each one at some particular time is an advantage, though it would not be wise to permit this intensive teaching altogether to take the place of the incidental instruction that teachers give, or ought to give, as occasion requires. The intensive work supports the incidental, making it more effective and eventually saving time.

Some of the subjects mentioned, such as music, dramatics, elocution, character training, etiquette, and the like, may profitably be taught in the auditorium. Groups of four classes each may be sent to the auditorium a half hour daily to pursue these special lines of work. The teachers best fitted to conduct auditorium activities would take charge of this part of the daily program, one teacher in each group acting as leader and another as pianist. This would leave two teachers of a group free for 30 minutes a day, and their time might be utilized as the principal deems wise. Or, they might be off duty this half hour and give the auditorium teachers a free period later in the day by taking charge of their group of four classes during the physical training period. Each of the two teachers having no auditorium duties might take two classes in the playcourts or gymnasium for games and calisthenics. Under this plan, special auditorium teachers or gymnasium instructors would not be necessary, the special abilities and aptitudes of the regular teachers being utilized instead. For this auditorium and physical training work, a group of four classes may be scheduled as shown on page 112.

When the auditorium and physical training activities are conducted according to the arrangement just described, some classrooms may be left vacant some part of the day. When a group of four classes

AUDITORIUM

2:00 to 2:30	$2B^1$, $2B^2$, $2A^1$, $2A^2$ MissA—— and Miss B——	
2:30 to 3:00	Gymnasium $2B^1$ and $2B^2$ Miss C——	Playground $2A^1$ and $2A^2$ Miss D——

2:00–2:30—Miss C—— and Miss D——, clerical work

2:30–3:00—{Miss A—— helps new teacher
Miss B——, orchestra practice one day a week

goes to the auditorium for 30 minutes and then to the playcourts or gymnasium for another 30 minutes, the classrooms of these four classes are vacant or may be placed at the disposal of four overflow classes. When a second group of four classes goes to auditorium and gymnasium, four other rooms are left free for use by these overflow classes. But since four classes may be in the auditorium while four others are in the yards or gymnasium, as many as eight overflow classes may be provided for without inconvenience; and by careful scheduling it is possible to provide for these extra classes without having them change rooms every hour in the day. In order to provide for eight extra classes, however, it would be necessary to have forty classes using the auditorium and gymnasium daily. It is better, of course, if each teacher can have a classroom that she can call her own; but in cases of emergency overflow classes may be provided for without recourse either to the platoon plan or to a part-time scheme.

Instead of giving teachers free periods, a principal may prefer to assign clerical or supervisory duties to teachers when they have no classes to teach. It seems wise to do this so long as the school day is not lengthened—and for obvious reasons it is not wise to extend the school day beyond five hours. The most competent teachers in the corps may assist the new or inexperienced teachers to become familiar with the routine of the school and to adopt effective methods of teaching. There is no more satisfactory way of training beginners than to use the able teachers as helping teachers. By properly using the "free" time of teachers, a principal may provide himself with a considerable amount of clerical assistance and relieve himself of much supervisory work.

In order that we may have a clear picture of the operation of the intensive plan, two programs are here presented, one for a grammar grade class and another for a primary.

GRADE $7A^1$—TEACHER, MISS A——

9:00–10:00—Specials on intensive plan

1st cycle	2nd cycle
Art Miss B——	Penmanship Miss C——
	Civics Miss D——
3rd cycle	4th cycle
Sewing (Boys, Manual Training) Miss A——	Penmanship Miss C——
	Hygiene Miss D——

10:00–10:45 Arithmetic
10:45–11:15 Geography
11:15–12:00 Language and spelling.
1:00– 1:30 Auditorium—Miss A—— and Miss C——
1:30– 2:00 Gymnasium—Miss B——, boys; Miss D——, girls
2:00– 2:30 History
2:30– 3:00 Literature

Notes.—1. Music, debating and thrift are taught in auditorium.
2. Miss A—— helps new teacher, 1:30–2:00.
3. This class is grouped with three others

(7A², 7B¹ and 7B²) for gymnasium and auditorium activities, and for specials on intensive plan.

GRADE 1A²—TEACHER, MISS E——

9:00– 9:30	Oral reading—First Section
9:30–10:00	Oral reading—Second Section
10:00–10:30	Language
10:30–10:45	Recess
10:45–11:00	Phonics or spelling
11:00–12:00	Specials on intensive plan
1:00– 1:30	Silent reading—First section
1:30– 2:00	Silent reading—Second section
2:00– 2:30	Physical Training—Miss G——
2:30– 3:00	Auditorium—Miss E—— and Miss H——

Notes.—1. Music, Dramatics, and Moral Training are taught in auditorium.
2. Miss E—— clerical work, 2:00–2:30.
3. This class is grouped with three others (1B¹, 1B², and 1A¹) for auditorium work, physical training, and specials on intensive plan.

	1st Cycle	2nd Cycle	3rd Cycle	4th Cycle
11:00 to 11:30	Penmanship Miss H——	Kindness to Animals Miss G——	Art Miss E——	Manual Training Miss F——
	Hygiene Miss G——	Penmanship Miss H——		
11:30 to 12:00	Art Miss E——	Manual Training Miss F——	Penmanship Miss H——	Kindness to Animals Miss G——
			Hygiene Miss G——	Penmanship Miss H——

There are other advantages to be gained by the intensive plan, but enough has been said to enable anyone to so program the work of classes as to obtain any particular result one wants. By a judicious use of teachers' time and ability, a principal may enrich the curriculum extensively, develop specialists along certain lines, provide himself with ample clerical and supervisory assistance, and, if there are an auditorium and a gymnasium, care for twenty-five per cent more classes than his building was built to accommodate, all without additional expense or burden to anybody; or rather, with less expense to the taxpayer and with an easier schedule for the teacher.

A principal would have no difficulty in scheduling his classes for the special activities. He would simply divide his school into groups of four classes each, number the groups, and then schedule them so that the auditorium and physical training periods would not conflict with the periods for the other specials. If he had ten groups of four classes each, his schedule for specials would appear like this:

Time	Specials on Intensive Plan	Auditorium	Gymnasium or Playcourt
9:00– 9:30		Group 4	Group 9
9:30–10:00	Groups 1 and 6	" 9	" 4
10:00–10:30		" 5	" 10
10:30–11:00	Groups 2 and 7	" 10	" 5
11:00–11:30		" 2	" 6
11:30–12:00	Groups 3 and 8	" 6	" 2
1:00– 1:30		" 2	" 7
1:30– 2:00	Groups 4 and 9	" 7	" 2
2:00– 2:30		" 3	" 8
2:30– 3:00	Groups 5 and 10	" 8	" 3

If there were fewer than ten groups, there would be some time when the auditorium and gymnasium would not be in use. If there were more than ten groups, three groups, instead of two, might take their specials at the same hour (it makes no difference how many groups take specials at the same hour: the work of one group does not interfere with that of another except in the grammar grades where shop work is given) and some groups (lower grades) may stay in their classrooms for music, etc., and for physical training, instead of going to auditorium and playcourts. If the number of classes in the building should be some number not a multiple of four, then there would be one, two, or three classes to be taught by the traditional plan, or for which a special program might be arranged. Other complications might be thought of, but the plan is so flexible that there is scarcely any situation that cannot readily be met in a satisfactory way.

SCALING LESSONS TAUGHT[1]

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What should be the lowest quality of lesson taught that would entitle a teacher to teach?

How well should a teacher teach in order to be advanced to a principalship?

How well should a teacher teach in order to become a competent supervisor?

How well should a teacher, principal, or supervisor be able to evaluate lessons taught by teachers?

The above questions, among others, might perhaps be answered a little better if we could have an objective measuring instrument by which to measure and judge lessons. The scale which is to be described is a pioneer effort in this field of schoolroom technique.

Ten samples of actual lessons taught from "miserably poor" to "excellent," in the judgment of an elementary education seminar, were selected from among a miscellany. These illustrations were descriptions in three instances, planned lessons which were immediately taught in two cases, the others being condensed stenographic, or long-hand, reports of lessons. The subjects of arithmetic, reading, composition, and geography were represented. The "drill lesson" type was excluded. The elements of "higher plane" teaching were to be the criteria, that is, where the ability to select, organize and generalize, infer, deduce, and verify was evident on the part of the class, such ability being presumably at the same time a reflection of the teacher's ability to so guide and direct a class.

A search was made for "standards" to be set up and held in mind on the part of the ones judging the lessons. Judgments, to be more valid, should have some "common elements" of identity or, in other words, those who are to judge should agree upon and know what features to look for in common in lessons to be judged or ranked or rated. The McMurry standards[2] for judging the quality of teaching were selected. Briefly, these subjective standards had as antecedents the motives, purposes, or principles which guide and direct men in meeting and solving their daily tasks. Life should determine *materials* to be taught; why should not life determine the *methods* of making use of such materials in the schoolroom? Adults, or children, have purpose in their daily activities or see a relationship between such activities and life. Resolves or determinations or ideals are constantly "set up," practiced, or inculcated in daily work. Selections and evaluations between relevants and irrelevants are constantly occurring. Sufficient data or criteria which are pertinent are related, organized, and held in mind until the task is satisfyingly completed and throughout all of the above runs self-help, initiative, responsibility for doing and obtaining results.

The ten illustrations of lessons were mimeographed and the judgments of one

[1] The writer wishes to express appreciation for encouragement in this study and assistance in the statistical technique to Dr. Marvin J. Van Wagenen of the University of Minnesota.

The scale of sample lessons will appear in the next issue of this JOURNAL.

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[2] McMurry, Frank M., *Elementary School Standards*, Chapters 1 to 4. World Book Co.

hundred twenty-nine experienced teachers (with one exception), supervisors, principals, and superintendents were obtained on the following lesson record sheet form. This form is given in toto because the general directions and standards for judging the lessons condense specifically the principles underlying this attempt.

LESSON RECORD SHEET

Place in "order of merit" the ten samples of classroom lessons, or descriptions of lessons. Do not allow "length" of lesson to influence. Place the "poorest lesson" in pile 1; the lesson "just a little better" in pile 2; and so on until the "best lesson" is placed in pile 10. Enter the order of placement below, according to letter (A, B, C, etc.)

In determining "merit of lesson," hold in mind the McMurry standards of: purpose or motive, sense of relative values, organization, initiative. Also hold in mind throughout the extent to which the material has life value, and in which interest, mental alertness, and purposeful thinking are manifest.

I have placed "in order of merit"

In Pile Number	The Lesson Lettered
1. Poorest.....	.....
2.....	.....
3.....	.....
4.....	.....
5.....	.....
6.....	.....
7.....	.....
8.....	.....
9.....	.....
10. Best.....	.....

Before returning samples of lessons, replace in A, B, C, order so your placement order will be broken.

Ed.....
Date.....
Signed.....
Position.....
Address.....

METHOD OF DETERMINING THE SCALE VALUES OF THE SAMPLE LESSONS

The principle that judgments of quality tend to be distributed in accordance with the normal surface of frequency was adopted as the basis for determining the scale values of the steps. This involves the principle that "differences equally often noticed are equal except when always or never noticed." For example, if seventy-five competent judges out of one hundred note that product Z is "as much better" than product Y as product Y is better than product X, et cetera, products X, Y, Z occupy, in their judgments, equal steps of difference in merit, such merit implying whatever criteria or principles were agreed upon or followed in passing judgment.

That lessons differ in quality would hardly be questioned. We may safely assume that teachers who teach are also able to note differences in the quality of lessons. Just as in evaluating English composition or drawing, so teachers can arrange in order of merit a series of lessons differing in quality. These differences, however, must be small enough so that in not every case is a lesson "seen to be better." At the same time such differences must be great enough that the lessons will not be seen to be equal. In the former instance we would have no way of knowing how much or how little better one sample was than another and in the latter case we would get no range or extent of merit in lessons. Say that five persons arranged in order of merit ten samples of lessons in such a way that each one to the right, in their judgment, was "a little better" than the one to its left. Let them enter the order number on the back of each lesson. If we calculate the average placement for each sample, the result is a scale of extent for lessons of differing degrees of merit. The "steps"

may not be equal but they would be known as steps of difference. This would be a simple way of arriving at a crude scale for such types of lessons.

A more refined procedure, however, was adopted in devising the present scale. After determining the per cent of times one sample lesson was judged better than another, such per cents of difference were then transmuted into fractional units of P. E. differences on the base line of the normal frequency surface. This was the method used by Thorndike for his drawing scale, by Hillegas, Van Wagenen, and Lewis in their scales for English composition, by Murdock in her sewing scale, and by Williamson in her scale for children's drawings (an unpublished Master's thesis in the University of California). While there are many variables, as in quality of lessons, this procedure, of course, can give only approximate values owing to the different weights which different judges would assign to the different elements in the lessons. Even so, it is considered sufficiently exact to make possible an instrument that can be employed much more effectively in evaluating lessons than is usually done on the basis of subjective evaluations.

Table I shows the average pile placement and the per cent of times each lesson was found better in quality than the preceding lesson.

ELIMINATING "POOR" JUDGMENTS

Teachers differ in ability to judge the merit of lessons as people in general differ in various traits. "Wild" judgments invalidate those more sane when composite scores are wanted. After determining pile placement order by the entire one hundred twenty-nine judges, the sum total of deviations for each judge in all of his ten rankings was calculated. What should constitute a sufficiently wide margin for a teacher's judgments to be considered too inexact? If one were incapable of seeing any differences at all in the ten samples of lessons and they were all laid, let us say, in the same pile, the sum total of difference between such placement and the ten pile placements actually found would be twenty-five points. This would be the same as tossing the ten copies of lessons up and numbering them from one to ten "as they came down." Just such a random test was made three times and the sum totals of deviations were found to be, respectively, 24—30—22! If an individual's placements were "off" in each instance two points from the composite order of placements, his deviations of judgments would total twenty. This might indicate at least *some* sense of discrimination.

Somewhat by chance one of the judges was an American born Chinese girl graduate student who had never taught. All others were experienced American teach-

TABLE I

Lesson	Average Pile Placement											
A	1.78	Poorest										
G	1.97	was noticed better than				A	58/107	times or	54.21	per cent of	times	
E	2.81	"	"	"	"	G	77/107	"	"	71.96	"	"	"
C	4.74	"	"	"	"	E	94/107	"	"	87.85	"	"	"
B	5.56	"	"	"	"	C	70/107	"	"	65.42	"	"	"
H	6.23	"	"	"	"	B	70/107	"	"	65.42	"	"	"
I	6.57	"	"	"	"	H	68/107	"	"	63.55	"	"	"
J	7.64	"	"	"	"	I	82/107	"	"	76.63	"	"	"
D	8.32	"	"	"	"	J	69/107	"	"	64.48	"	"	"
F	9.35	"	"	"	"	D	85/107	"	"	79.44	"	"	"

ers, supervisors, principals, or superintendents. It stands to reason that teachers should at least be as capable to judge differences in lessons as a Chinese student whose only work had been in theory. Her deviations of judgment totaled eighteen points. This was taken as a criterion and six series of judgments were thrown out. But this was not considered a severe enough standard so, somewhat arbitrarily, "just one less mis-step" was determined upon, or a sum total of sixteen points deviation. This eliminated sixteen more, leaving a total number of one hundred seven judgments upon which the per cents of better judgments were calculated and the scale steps determined. One of the most surprising findings in the twenty-two eliminations was that seven were either elementary school principals or supervising principals! This suggested some pertinent questions at the beginning of this article. Exactly fifty-four, or one half of the final number, however, deviated eight points or less, which was less than a "step off" for each of the ten samples.

LOCATING LESSONS ON THE SCALE

Assuming that even a lesson which 999 competent teachers and supervisors out of a thousand would place below lession A—the poorest of these samples in quality—would still have some merit, we may arbitrarily place the zero point of quality of lessons at least five steps of one P. E. deviation each below lesson A. The next step then was to assign values to each sample on the basis of the per cents of "better judgments," with reference to sample A, which was temporarily considered as of zero value. This was done by the use of a probable error table as in the derivation of the Hillegas English composition scale. These values corresponding to each per cent of better judgments are given in Table II.

Table II reads, for illustration: Lesson G was found better than Lesson A by 54.21 per cent of the judges. Let the P. E. value of Lesson A be .000 (temporarily considered as of zero value). The P. E. value of Lesson G becomes .156. Column 4 in the table is derived from the P. E. values of column 3 by adding the values cumulatively, thus referring each specimen to the A sample. As the arbitrary zero point was placed at 5 P. E. below sample A, 5 is added to each of the specimen values, as in column 5 of the table. The unit of measurement in quality on the

TABLE II

1 Lesson	2 Per cent of times better than previous sample	3 P. E. values with reference to next sample below	4 P. E. values with reference to Sample A	5 Final values with reference to the Zero point
A (Poorest)		.000		5.000
G	54.21	.156	.156	5.156
E	71.96	.862	1.018	6.018
C	87.85	1.731	2.749	7.749
B	65.42	.589	3.338	8.338
H	65.42	.589	3.927	8.927
I	63.55	.514	4.441	9.441
J	76.63	1.078	5.519	10.519
D	64.48	.550	6.069	11.069
F	79.44	1.219	7.288	12.288

scale is thus that amount of difference in merit which seventy-five per cent of competent judges note between lessons. This unit conforms exactly to the P. E. difference in the normal distribution surface. The lesson illustrations, together with their scale values, and placement on the scale, follow in the next issue.

Contemplated Improvements in the Scale

1. Adequate as the scale is, it does not include extremely poor lessons or the very best lessons. These, however, can be added as appropriate illustrations are found.
2. Although the scale with its specimens falling at unequal distances apart is a usable one, it will be still more adequate when sample lessons are selected to fall exactly at each half step as in the case of the Hudelson Composition Scale.
3. Likewise it will be simpler to use when the same type of lesson is used in each step of the scale. Also the inclusion of a series of lessons for each grade, or group of grades, as well as each subject, would be a distinct advantage. This is a step that it is planned to carry out in the near future.
4. A more uniform method of reporting the substance or procedure of lessons might add to more constant factors.
5. Through an experimental procedure it will eventually be possible to eliminate all irrelevant comments.

Uses of the Scale

1. A teacher can compare a lesson taught with those of the scale and note its relative value.
2. The teaching in a school system can objectively be compared to the teaching in another system.
3. Teachers and principals can note progress in attempted improvements in teaching.
4. Persons can be tested in their abilities to judge and rank lessons.
5. Standards might be set, the attainment of which would mean certification for teaching.
6. The factors that are essential in training courses for teachers may be experimentally determined.
7. The effect of various conditions such as size of class, number of teaching periods taught per day, length of teaching experience etc., upon the efficiency of instruction may be experimentally determined.

A MEANS FOR THE SELECTION OF GROUP PROJECTS

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In a recent article appearing in this JOURNAL the writers described a technique for obtaining evidence of children's felt needs.[1] Herein it was pointed out that the most reliable indication of the felt need of the child is to be found in the activities to which he spontaneously turns in his leisure—activities in which he engages "just because he wants to." Two hundred activities in which children in Grades III-XII most frequently engage in their leisure were ascertained by examination of a large number of children. During the school year 1923-24, this list was checked by five thousand children in four Kansas towns. The test was given to the children three times during the year. The results of the technique employed were reported in the article referred to above.

It is probable that some of the findings are indicative of more or less general interests of American children. However, there is likelihood that some of the interests manifested by the Kansas children are regional or local ones. It is further likely that some interests vary from year to year. Obviously, the ideal means for the selection of group projects is to study the felt needs of the particular group for which projects are being devised.

The writers feel that best results can be obtained if each teacher will make frequent studies of the interests of his pupils. A device for discovering these interests, with complete instructions for administering, follows:

A Device for Discovering the Play Activities of School Children[2]

(Suitable for Grades III-XII)

Preparation

Use paper ruled on both sides. Instruct the pupils to make creases by folding the paper from top to bottom. The creases should be about one inch apart. If 8 x 11 inch paper is used, this will provide eight columns in which the pupils may give the desired information. The folding provides economy in paper consumption.

Have each pupil write desired information such as name, age, grade of school, etc., at the top of the sheet.

Instruct the pupils to number the lines one to two hundred, passing down the whole length of one column before going to the next one. Have the numbers placed as near the left edge of the column as possible as this makes for more rapid handling of the results. Use both sides of the paper.

General Explanation

Explain to the pupils that you want to find out what they like to do. Tell them that the papers are to be handed in, that the papers will not affect their grades but that you wish them to be as accurate as possible in answering your questions.

Explain to the pupils that you are going to read them a list of two hundred games, sports, and play activities, and that each activity is numbered. Ask them to listen carefully while you read through the list

[1] See the issue of October, 1926, p. 66.

[2] The writers are indebted to J. Crosby Chapman for suggestion of this procedure.

and to draw a circle around the numbers of the activities in which they have engaged *during the preceding week*. Emphasize that they are to indicate *only* those activities in which they have engaged during the preceding week.

Illustrate for the class how the work is to be done by writing the following phrases on the blackboard. (Write digits also.)

1. Riding on a warship.
2. Going up in an airplane.

Tell them that if these activities are in the list that is read, and if they took part in them during the past week just because they wanted to, they are to draw circles around the numbers of these two activities. (Illustrate for them.)

Read the following paragraph to the members of the class.

"But if you did *not* do these things during the past week, do not make any circles. Think of just the things that *you have been doing*. And do not report any of the things that you did a long time ago. Report just the things that you have been doing during the past week. Do not put circles around just the numbers of things that you have been doing here at school. You must put circles around the numbers of the things that you have been doing for fun here at school, at home, and every place else.

"Now I am going to read through two hundred activities. You must follow the numbers on your paper as I read. I will read a number and then I will read the activity that the number represents. Remember, if you have done any of the things mentioned, or if you have played with any of the toys mentioned, put a circle around the corresponding number. But if you did not do the thing during the past week, or if you did it but did not like it, do not make any mark on the paper."

In reading the list to the pupils pause for about six seconds at the end of each activity. This will afford the pupils time to grasp the meaning of each activity as it is read. It will also afford time for recall.

The list is too long for third and fourth grade pupils to complete at one sitting. The third and fourth grade pupils will take, therefore, only the first 125 items on the first day of the test. They will finish the task on the following day. The older pupils may finish the test at a single sitting.

In reading the list to the pupils be sure to read the number that goes with a given activity. Fewer mistakes will be made if the pupils cover the numbered sheet with an unused sheet of paper exposing each number as the teacher calls it with the corresponding activity.

LIST OF ACTIVITIES IN WHICH CHILDREN FREQUENTLY ENGAGE IN THEIR LEISURE

1 Football
2 Basketball
3 Baseball with a hard ball
4 Ball with an indoor or playground ball
5 Just playing catch
6 Volley ball
7 Handball
8 Golf
9 Tennis
10 Running the gauntlet
11 Boxing
12 Wrestling
13 Checkers
14 Chess
15 Dominoes
16 Marbles
17 Roller-skating
18 Sliding on a playground slide
19 Sliding on a toboggan slide
20 Coasting on a coaster
21 Coasting on a wagon
22 Coasting on a sled
23 Swinging
24 Ice-skating
25 Sleigh-riding
26 Riding in an auto

27 Driving an auto
28 Riding a bicycle
29 Horseback riding
30 Rolling a hoop
31 Rolling an auto tire
32 Velocipede
33 Excursions to woods, parks, country, etc.
34 Gathering fruit
35 Gathering berries
36 Gathering nuts
37 Gathering flowers
38 Collecting stamps, bird's eggs, etc.
39 Just hiking or strolling
40 Going to the movies
41 Attending the theatre
42 Going to entertainments, concerts, etc.
43 Going to parties or picnics
44 Going to Sunday School (if you liked it)
45 Going to church or to mass
46 Sight-seeing
47 Attending lectures
48 Visiting or entertaining company
49 Chewing gum
50 Smoking
51 Having "dates"
52 Just loafing or lounging
53 Social dancing
54 Folk-dancing
55 Card games, such as authors, bridge, whist
56 Literary clubs
57 Social clubs, or being with the gang
58 Listening to the phonograph
59 Listening to the radio
60 Playing the piano (for fun)
61 Playing other musical instruments for fun
62 Looking at the Sunday "funny paper"
63 Looking at daily comic strips
64 Reading jokes or funny sayings
65 Reading the newspapers
66 Reading or looking at magazines
67 Reading other short stories
68 Reading books
69 Telling or guessing riddles
70 Doing cross-word puzzles
71 Telling stories
72 Listening to stories
73 Writing letters
74 Writing poems
75 Telling fortunes or having fortunes told
76 Hunting
77 Fishing
78 Boating or canoeing
79 Camping out
80 Building or watching bonfires
81 Climbing porches, trees, fences, posts, etc.
82 Making something
83 Fixing or repairing something
84 Doing gymnasium work
85 Doing stunts in the gymnasium
86 Turning handsprings, cartwheels, etc.
87 Doing calisthenics
88 Playing on the giant stride
89 Playing teeter-totter
90 Just running and romping
91 Running races
92 Hop, skip and jump
93 Jumping for distance
94 Jumping for height
95 Pole vaulting
96 Leap frog
97 Hop-scotch
98 Jumping or skipping rope
99 Other hopping games played on sidewalk
100 Follow your leader
101 Fox and geese
102 Run, sheep, run
103 Hide and seek
104 Kick the can
105 Blind man's bluff
106 Hide the button
107 Hide the thimble
108 Andy-over
109 Black man
110 Other tag games
111 Crack the whip
112 Whistling
113 Dodge ball
114 Old sow
115 Dare base
116 Bean bags
117 Jacks
118 Matching pennies
119 Throwing dice or playing "Put and Take"
120 Stealing watermelons, fruit, etc., for fun
121 Playing pool
122 Billiards
123 Bowling
124 Croquet
125 Pitching horseshoes

(Third and fourth grades stop here first day.)

126 Mumbly peg
127 Throwing rocks or stones
128 Shinney on your own side
129 Pillow fights
130 Snowball fights
131 Teasing somebody
132 Teasing birds or animals
133 Bow and arrows
134 Shooting a gun
135 Playing in the sand
136 Wading in the water
137 Building a dam
138 Swimming
139 Dressing up in older folks' clothing
140 Playing circus
141 Playing house
142 Playing horse
143 Playing store
144 Playing school
145 Playing church
146 Playing Sunday school
147 Playing bandit
148 Playing soldier
149 Playing nurse
150 Playing cowboy
151 Playing Indian
152 Train conductor, engineer or brakeman
153 Playing robber and police
154 Playing movie actor or actress
155 Playing other make-believe games
156 Just imagining things
157 Statuary
158 "Here I come." "Where from?"
159 Tin-tin
160 Post-office
161 Spin the pan
162 London bridge
163 Other singing games
164 Just singing
165 Drop the handkerchief
166 Three deep
167 Other ring games
168 Old witch
169 Pussy wants a corner
170 Making mud pies, mud dolls, etc.
171 Clay modelling
172 Drawing with pencil, pen, chalk or crayon
173 Painting with water-colors
174 Cutting paper things with scissors
175 Making a scrap-book
176 Taking snap-shots
177 Stringing beads
178 Sewing, knitting, crochetting, etc., for fun
179 Using a hammer, saw, nails, etc., for fun
180 Digging caves or dens
181 Building snow men, snow forts, snow houses
182 Spinning tops
183 Flying kites
184 Walking on stilts
185 Toy airplanes, toy balloons, toy parachutes
186 Toy trains, ships, autos, wagons, etc.
187 Playing fire engine (or hook and ladder)
188 Looking at pictures
189 Toy blocks
190 Toy horn, toy drum, etc.
191 Dolls, doll carriages, doll clothes, etc.
192 Other toys
193 Picture puzzles
194 Wire puzzles, string puzzles
195 Making or assembling a radio or other electrical apparatus
196 Playing with pet dogs
197 Playing with pet kittens
198 Playing with other pets
199 Watching athletic sports
200 Helping somebody with his work

When the list has been finished, say to the pupils: "Now think of any toys that you have played with, or any games that you have played during the past week, which were not in the list. If you can think of any, write them on the unused portion of your paper."

The tabulation of the group results is a very simple matter and it is well to permit the children to assist in this tabulation. The activities most generally participated in should next be listed in such a manner that those most commonly engaged in will appear near the top of the list.

It is suggested by the writers that these tables be used by teachers in choosing group projects. It seems likely that a large number of group projects can be formulated for use in specific grades which are based upon or embody one or more of

the activities which fall well toward the top of such lists. It is, of course, obvious that some of the items found in the play list are not suitable ones to be used in classroom activity. It is desirable that the teacher recognize undesirable behavior patterns as well as desirable ones and that emphasis be placed upon the latter.

References

1. Lehman, Harvey C. and Witty, Paul A., "A Technique for Obtaining Group Projects." *The Journal of Educational Method,* Oct., 1926, pp. 66-74.

2. Chapman, J. Crosby, "A Group Intelligence Examination without Prepared Blanks." *Journal of Educational Research,* April, 1925, pp. 269-280.

CHILDREN'S PARTICIPATION IN RECORD KEEPING IN KINDERGARTEN AND PRIMARY GRADES

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There was a time in the history of education in this country when research and constructive thinking were left to the specialist or to persons in authority over the teachers. That day is past and it is now generally recognized that the many problems of modern education must be solved in the classroom. Every teacher must be a scientific investigator. Her experiment may be a small one, but it is sufficient to keep her growing and to make teaching the fascinating game it should be.

Records of children's progress have furnished, in recent years, many problems for experimentation in kindergarten and primary grades.

Kindergarten-primary teachers have felt the pressure of proving to themselves and to the rest of the elementary school that the modern school procedure which encourages initiative, originality, and independent thinking in children forms right habits, knowledge and skills. Realizing the progress of accurate, scientific measurement of results in education, the teachers have searched for ways to measure the growth of the little child.

At first, teachers undertook the record-keeping themselves. Several years ago experiments were carried on in many city school systems and in University Departments of Education to find out what little children do when they are put into a stimulating school environment and given freedom to choose their work. From many such records curricula were built which met more closely the needs of the children. But record-keeping was a tedious process. Teachers felt that they would either be obliged to quit teaching school in order to keep records or quit keeping records in order to teach school.

Then, too, modern psychology demanded that children be conscious of their own improvement. This was not possible when the teacher, alone, recorded progress in habit formation. Then began a search for ways of encouraging children to help check themselves. The teachers began, a little timidly, to give even the kindergarten children an opportunity to check themselves.

A number of teachers in San Francisco have experimented with such records and all are enthusiastic in the belief that the records are of great value to both teacher and child. All of the records are charts made of common wrapping paper a yard wide and a yard or two in length and are posted low enough for children to use. Many different kinds of records have developed. A group of experienced teachers especially interested in these problems formed a class and appealed to their supervisor to give an extension course through the University of California. This class met every two weeks. The teachers reported progress, exchanged ideas, and continued to try out different kinds of records. At one of our general meetings of kindergarten-primary teachers, all of these records were exhibited and discussed, thus stimulating their further use in all of the schools.

In one school in which children were in the habit of straggling into the kindergarten a few minutes late, a record like the following was posted upon the wall

inside the classroom door, and the children began to put a check in the proper space each day and to proudly count up the total number at the end of the week. The immature put a row of checks in the column of totals, while the more mature children entered wobbly, but soul-satisfying, figures in the space for totals.

I Got to School Before Nine

	Mon.	Tues.	Wed.	Thur.	Fri.	Total
John.....	x	x	x	x	x	xxxxx
Mary.....	x	x	x	x	x	5
Susie.....	x	x	x	x		4
Etc. for 30 children						

We believed that the right habit could best be secured through the child's satisfaction in marking himself and seeing the record rather than in being offered a prize even of a star or seal. The practice of putting a black mark for failure to do the thing and a red mark for the right habit was discarded because we questioned the psychology of the negative mark and the teachers also found that very young children were just as pleased to make a black mark as a red one. For this reason we checked only the positive, leaving the negative blank.

The rest period, the lunch period, corrected habits of speech, choices of work period—all of these have furnished the basis of records for the kindergarten.

In one of our schools, in which the children are mostly from non-English speaking homes where health habits are likely to be neglected, the kindergarten teacher posted a record to check the clean face, shining shoes, use of the handkerchief, etc. Interest in seeing the little folks mark the record was so great throughout the school that a crowd of older brothers and sisters were always waiting at the door when the kindergarten teacher arrived in order to "see that Johnnie makes his marks."

In the kindergarten of our Chinese School the teacher was confronted with the problem of getting thirty-five Chinese children to speak English. There were only three who could speak a word of English when they entered—they seemed satisfied to chatter in Chinese. But as soon as the teacher posted a chart and began to write upon it any spontaneous English word or phrase spoken and to call the group together and say: "John Toy speaks English. He says, 'More red paint,'" etc., many of the children made a great effort to talk and were delighted with themselves for doing so.

Records were more elaborate and varied in the primary grades. The first records were of the Free Work Period and the use of the single copies of books on the reading table. Even first-grade children were keenly interested in a key or code for marking, using different colors, or different numbers, etc.

At one of our conferences the teachers expressed the thought that it might be possible for us to combine the teacher's and child's record in some way so that span of attention, source of stimulus, etc., might be recorded in one column by the teachers. This proved satisfactory but aroused such great curiosity among the children that an explanation in simple terms was necessary. One of the first-grade teachers explained to her little class of Italian children, who were wont to jump from one piece of work to another without finishing anything and to scramble over each other whenever they were allowed to choose materials, that she had a column this time on the record that meant "Patience." The children were much impressed and in a few days began to go to the teacher and say: "See, I made it all," or, "I didn't hit nobody when I had to wait; I am patient."

In the second and third grades the following type of record of activities of the day, which includes a check of the library copies, has been successful:

A Week's Free Work Record in a Third Grade

	Mon.	Tues.	Wed.	Thu.	Fri.
Mary J....	3 x	3 x	5 x	10 2	10
Ella M....	8	8 x	11	11 x	14 15
Lucile M...	2	10	10	10 x	2 1
John A....	6	2 12	7	7 x	6
Alfred B...	12 x	12 x	2 7	7 14	1 x

Etc. (36 children in class)

Key to Marking

1. Made Christmas toy of wood.
2. Read a story.
3. Painted a good picture.
4. Learned the 4 x tables.
5. Wrote a good story on the board.
6. Worked on the poster.
7. Worked on the puppet screen.
8. Practiced writing the invitation to mother.
9. Prepared a story at home and read to class.
10. Sewed table cover.
11. Sewed bean bag.
12. Printed the newspaper.
13. Made doilies for lunch table.
14. Helped another child with numbers.
15. Played a word game.

(x means finished.)

Each week's record was preserved and made into the month's record.

The children's individual records were taken home at the end of the week and were of great interest to the parents.

In one class the children used colored circles instead of numbers for the key, each color meaning a certain activity.

In connection with the use of this record each child kept an individual record consisting of several pages. Every day each child recorded in his own record book what he had accomplished. On Friday the group met with the teacher and the large record was marked, using the key numbers. Each child was required to justify the use of his time. He might show that he really understood the story he had read by making a painting of one or more of the scenes of the story and bringing it to the group meeting, or he might read or tell a part of the story and then say, "If you want to read the rest, you will find it on page 98 of the —— Reader." Sometimes a child would gather a group at some free work period and prepare, with their help, the dramatization of a story, which would be given at the Friday gathering.

In some third-grade classes an organized library card system was used with success.

After considerable experimenting, the teachers who have used the records are enthusiastic about their value. We have gone only a step of the way—there are great possibilities ahead, and it may be that out of these experiments there will be developed an accepted form of record. We are inclined to think, however, that it will always be better for individual teachers to develop the records as the needs of the group demand and that no one practice will ever be the one best way for every teacher.

THE CLEARING HOUSE

THE BUILDING OF A PLAYGROUND AND ITS USE[1]

One bright day, when tinges of autumn were crisping the air and flooding small beings with energy, we started off to obtain lathes to build a fence. Some new buildings were going up in the neighborhood and the men gladly gave us some lathes which they were not going to use. In their enthusiasm the children gathered too many lathes for the fence and felt the extra ones should not be wasted. Thus a social problem in good citizenship was worked out: it is best not to get too much material, but if one does, use it.

Some one suggested that lathes would make good ties and tracks, so it was decided to build a railroad track. As a natural sequence, a train was conceived, planned, and built. Another field trip to Fleishhacker Playground resulted in the idea of having a complete playground.

As in all worth-while projects, achievements were attained in subject matter and good habits were formed while working it out.

There was so much to be planned and everyone was so anxious to suggest ideas, that spoken language made great advance. At the opening of work time, group discussion took place, all the children taking part. The great difficulty here was to prevent all discussion being carried on by two or three. The more timid children had to be brought forward and made to feel the urge for speech. This was excellent ground for the correction of grammatical errors which also arose in the actual work. A favorite expression at the start was, "I ain't got any nails," which gradually and by infinite patience was changed to, "I haven't any." "Can I?" gave way to his more polite brother, "May I?" "I done" was routed, after a terrific battle, by "I did." "We was," though very persistent, at last gracefully withdrew to make way for "we were."

New words came popping up each day, to be tucked away inside a growing vocabulary. Really tucked away they were, since they were known, examples could be seen, and the meaning and use were clear. Some of the words were:

tiger	mail car	manger	giraffe
suitcase	stable	lion	journey
elephant	trip	railroad	brakeman
signal	engineer	passenger	box-office

The making of the project was an excellent motivation for language. What did other people think, or say, or sing about their engine, see-saw, or the animals on the merry-go-round? We read "The Pony Engine," a story; "See-saw, Marjorie Daw" is sung with gusto; Stevenson's lovely verses once more become familiar with "How Do You Like to Go Up in a Swing?"

Active dramatization was necessary in running the playground. We needed managers and operators, and wee kindergartens were the only material, so each played a part. The ticket seller, the brakeman, the engineer (at least these tots will have completed that urge felt by every red-blooded boy to be an engineer and need develop no inhibitions on the subject), the runner of the merry-go-round, the manager of the horses, the stableman, all were characters to be entered into and lived.

[1] This project was worked out by the kindergarten class at the Daniel Webster School, San Francisco.

Publicity men in this, as in greater undertakings, were a necessary evil. Hence five children formed the advertising committee and went about in the primary grades inciting interest, describing the marvels of the playground, and inviting visitors, who brought one large nail for a ticket.

Written language was taken care of by the signs necessary: "1 ticket for 1 nail," "Tickets," "Merry-go-round," "Train," "Horses," "Swing," "Slide," "See-Saw," "Beware of the Dog," and "Playground" on the head bands of officials. It was necessary to ask the help of the primary classes in writing these signs.

The writing of these advertisements required spelling—no one could read a sign with misspelled words. Also, one must learn to read each sign and know it so that, no matter where it was, it could be recognized. Otherwise things would be sadly mixed up.

Number work was not forgotten. The children learned to write the figure 1 on each ticket. It was necessary to be able to count when giving out nails or selling tickets. Everyone could read the numbers on the train, 101-999. In a broader sense the study of numbers was helped greatly. A sense of proportion was developed in estimating the distance between railroad ties; in judging how large one thing must be to go well with the others; considering the size of the dolls to ride on the merry-go-round—too large ones would topple off.

This is an excellent example of Industrial Art. Handwork here is used to make something useful, something worth while. Artistic sense is built up in discussing choice of colors for the various activities, in arranging them in places, in making the surroundings attractive. I am inserting a list of actual things completed in the playground.

1. Railroad track—	50 ft. oval track, 10 inches wide; made from half lathes.
2. Engine—	Two marcaroni boxes, bell, cord.
3. Coal car—	Small wooden box (both engine and car painted).
4. Tickets—	Made from paper strips, cut and perforated with pins.
5. Dolls and dresses—	For use on merry-go-round and trains; paper dolls of cardboard, 10 inches tall.
6. Slide—	Lathes and a smooth board.
7. Sand-box—	Four boards; bottom of slide runs into sand box.
8. Aeroplanes—	Large enough to ride on; coaster principle.
9. Horses—	Heads made on stick.
10. Coal—	Paper cut and colored.
11. Mail car—	Soap box with door cut in sides; wheels, axles, etc.
12. Passenger coach—	Soap box; three seats made of wood; two doors, six windows.
13. Suitcases—	Small cardboard boxes, colored and strapped.
14. Two flags—	Green and red paper on sticks.
15. Signal—	Upright lathe with two movable crosspieces.
16. Station—	Made from boxes with bench; train schedule printed on side.
17. Barn—	Wooden division; stalls for horses, mangers for hay.
18. Two-seated swing—	For dolls; seat swung on top bar.
19. Merry-go-round—	A large circle of beaver board, holiday crepe paper animals nailed to blocks of wood with pole in front; pole through cement supporting top; awning

made of sacking with fringe of red and yellow yarn; a flag on top of awning.

20. See-saw— Yellow board on supporting center stand.

21. Ticket office— Built of boards; modeled after theatre offices.

22. Paper dolls— 10-inch.

All of this apparatus was painted in bright colors, making a brilliant splash of color.

Several things in the playground made music essential and implanted a sense of rhythm. Merry-go-rounds are always associated with musical noise so a merry-go-round song and game were learned. A train song called "Playing Train" developed as a result of the clanging bell and clip, clip of cars over ties.

Gallapy-trot, gallopy trot.
Here we go to ————.

Close your eyes and remember the rest of it and I doubt if even now you could ride a horse which, though a stick to an adult, is a fiery untamed steed to a child, without singing it and galloping along in tune.

Good habits of a lasting character were daily being formed. The energetic play in open air was certainly healthy. Cleanliness and order became necessary. The grounds must be cleaned each morning and no one would patronize a playground with ill-kept attendants. Space was limited and great care must be taken to arrange things neatly and keep them spick and span.

Besides these physical habits, the more plastic clay of the soul was receiving impressions which formed good moral habits and increased social value.

A feeling of responsibility grew from groups—one owed something to the others in the group and could not just please one's self. At the same time each worker became self-reliant. A definite task must be worked out and each had his own. As usual, a few who could work faster, direct better, urge others, were found and became leaders. Kindness toward one another in helping out was noted and encouraged. A word of praise often leads to emulation of the act. A beautiful spirit of coöperation was in evidence throughout. They were quite willing to wait turns, and the few who might not have been, seeing the courtesy of the others and noting its effect, a little shamefacedly went back to their proper places.

On the whole, the project was an unqualified success. It was well executed, gave lots of clean, wholesome fun, taught lasting lessons in subject matter, and added to the fineness of little people, thus helping the world.

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TEACHING "SAFETY FIRST" TO FIRST GRADE CHILDREN

"November the ninth is Safety First Day. At some period during the day, teach a lesson which will impress your children with the fact that many of our accidents are due to carelessness."

Thus read a notice which came to my first-grade room. With a sigh I crossed off the number of my room (signifying that I had received the notice). Then I said to myself, "What will they ask me to teach next?"

Fortunately I did not have time just then to answer my own question. But at lunch time I again thought of the notice and wondered how I could bring the subject of "Safety First" to my children without suggesting to them some reckless performance which had never before occurred to them. I came to the conclusion that the subject was perfectly all right to be taught

in grades three to eight, but I should never attempt it with my babies.

That same evening, as I was busily engaged in writing "plans" for the next day, there came to my ears a childish voice.

"All right, Bill! Ding! Ding!"

I knew it was my four-year-old nephew playing in the next room. I also knew before I went into the room that he was playing "trolley conductor." Quick as a flash came an answer to my "Safety First" problem. Could I not find something in the play box which would greatly help me on November ninth? And thus began my experiment, which proved that small nephews are very valuable experimenting material! My scheme fascinated him, so why should it not prove successful in the schoolroom?

Safety First Day arrived and found me taking to school a number of toys from the play box. I remembered what a bundle of curiosity my kiddies were and I therefore wrapped each toy. I had planned no special period for this lesson but decided to use it any time during the day when interest seemed to lag.

That period arrived and I took from my desk the first surprise package. The children were given a chance to guess what the package contained and you can imagine they guessed everything. They held their breath while I unwrapped the package and brought forth—a celluloid doll! And then there were exclamations of delight.

I explained that the little girl was a visitor, and a most peculiar one because she did not have a name! Then came the fun of naming her. The majority of the children seemed to favor "Mary," so Mary she became. I knew lots of things about Mary and the children listened eagerly as I told them.

"Mary was a little girl in the first grade at school. Of course she just loved to go to school. Every morning she would kiss her mother and skip happily to school. One day, as Mary was skipping along, she came to the street crossing. Here she stopped. She always stopped when she came to the corner. She looked up the street and saw nothing. She looked down the street and saw ——"

At this point I produced another package, this containing a toy trolley car.

"Mary waited for the trolley to pass and then she hurried across the street. At the next corner she stopped again, looking to be sure it was safe to cross. But it wasn't safe to cross, for up the street came an ——"

Here another surprise package was introduced, this time a toy automobile.

"After the automobile had passed, Mary crossed the street. Ahead of her she could see a great white sign. She knew what that meant. It was put there to tell her she must be careful because the steam cars crossed there. Mary could read the sign. It said , 'Railroad Crossing. Look out for the Locomotive.' There was another one which said, 'Stop! Look! Listen!' "

Similar signs were shown to the children and then put in conspicuous places in the room.

"You may be sure that Mary was careful when she crossed those tracks. How glad she was when she came in sight of the school! On a telephone pole some distance from the school was another sign. This, too, she could read; it said, 'School, Go Slow!' Mary's daddy had told her that this sign helps the people who drive automobiles. When they see the sign they slow down their machines because they know that perhaps many little children will be crossing the street there.

"We have a sign like that. I will show it to you and then when you are outside, see if there is a sign like it near our school.

"Mary always had a happy time in school but she was never sorry when the

teacher said it was time to dismiss, because she loved her home quite as much as her school. It was while Mary was going home from school one day that she heard a bell. She had heard it many times before, and she knew just what it meant. Fire! Mary stopped right in the middle of the square. She always did when she heard that bell. Mother had told her that was the very best thing to do because the fire engine would rush down the street, looking out for no one, so anxious were the firemen to save the building which had caught fire. Then, too, there would be many other automobiles hurrying to the fire. When the excitement was over, Mary could safely cross the street.

"Going back and forth to school, we have seen that Mary was always very careful to look and make sure that no trolley car, automobile, or train was in sight when she crossed the streets. But when she went shopping with Mother, she noticed that at some of the busy corners Mother crossed when machines were in sight. At these corners stood a man dressed in a blue uniform. He waved his hands, first to the people who were walking and then to the people in automobiles. Mother explained that he is the traffic policeman, who helps people cross busy corners. Everybody must watch him and cross only when he gives the signal.

"I wonder how many of my boys and girls have seen our traffic policemen? Have they ever helped you cross the street? Here is the big, fat, jolly one that Mary knew." And I produced an iron policeman.

"Now, I wonder if you would like to tell me some stories about Mary. I will let you use this small table for the street. You may use the doll and just one of the other toys in your story. You may tell a story, using the trolley, or the automobile, or the fire engine. But each child must use only one toy and tell just that part of the story. As you tell the story you may walk Mary up the street, have her stop while you run the trolley past, and then take her on to school."

The children's stories were wonderful—much more interesting than mine. One little girl insisted on having some one ring my desk bell when she told the part about Mary hearing the fire bell. And how she did rush that fire engine across the table!

After we had finished telling stories about Mary's experiences, we turned our attention to the signs—all of which we had put up in the room. These provided reading material.

Then we decided to put our story on the sand table. We made little signs like the larger ones which I had printed. One boy constructed a paper schoolhouse which we labeled "R. D. Wood." In the center of the table we put the jolly traffic "cop," who, with his uplifted club, directed the busy street with its passing trolleys, trains, automobiles, fire engines, etc.

I learned that even the very smallest of my children were reading and not memorizing the little signs on the sand table, because one little girl in the "C" class came to me with the startling information that the sign near our school said "School, *Run* Slow" and not "School, *Go* Slow" as the sign near Mary's school read! Of course we changed our sign for the sand table and made it like the one outside our own school.

It is quite unnecessary, I think, to state that we had a wealth of material from this lesson for future language, reading, spelling, and handwork. And I now believe that "Safety First" can be taught to first-grade children.

Rita Hogan,
Millville, N. J.

AS REPORTED

MUSIC AT THE DALLAS MEETING OF THE DEPARTMENT OF SUPERINTENDENCE

One of the principal features of the meeting of the Department of Superintendence to be held in Dallas, Texas, in February will be the appearance of a national high school orchestra composed of about 250 players. The members will be chosen from high schools in all parts of the nation. It is expected that every state will be represented.

Such an orchestra was arranged for by the National Council of Music Supervisors in connection with its annual meeting held in Detroit last April. On that occasion representatives from the high schools of over thirty states were brought together. After four days of training in preparation for the giving of a concert, the young players performed with a remarkable degree of artistic skill.

The committee in charge of the orchestra for the Dallas meeting will include several persons who assisted with the meeting in Detroit. Among the members of the committee are: Joseph E. Maddy, supervisor of music at Ann Arbor, Michigan; V. L. F. Rebmann, director of music, Yonkers, New York; Glenn H. Woods, director of music, Oakland, California; Lee M. Lockhart, director of instrumental music, Council Bluffs, Iowa; Walter Aiken, director of music, Cincinnati, Ohio; and Edgar B. Gordon, University of Wisconsin, Madison, Wisconsin.

The music for the program in Dallas has already been selected and more than half of the players in the national orchestra of last year will be present for the second performance. The coöperation of educators in all parts of the country is requested, both in the matter of selection of players and in the provision of traveling expenses. Several boards of education last year appropriated money enough to defray the expenses of the representatives from their cities.

Applications for membership in the orchestra should be sent to Mr. Maddy at Ann Arbor, Michigan, or to any other member of the committee. The ability of the applicant will be carefully investigated and only the most proficient will be chosen. A definite limit has been set as to the number of players on each instrument.

Superintendents in attendance on the Dallas meeting will have an unusual opportunity to see the possibilities of orchestral instruction in public schools.

COÖPERATIVE CURRICULUM REVISION

The Commission on the Revision of the Curriculum, appointed by the Department of Superintendence of the National Education Association, is devoting the present year to a study of the curriculum of the junior high school. The main commission is made up of twenty-five members under the chairmanship of Superintendent Edwin C. Broome of Philadelphia. Subject committees have been organized for the study of the following parts of the junior high school curriculum: Art, Commercial Education, English, Foreign Languages, Health and Physical Education, Home Economics, Industrial Arts, Mathematics, Music, Science, and Social Studies.

In the preparation of reports on these various subjects, information will be sought on aims and objectives in relation to the special function of the junior high

school; the review of research studies already made; the problems peculiar to the subject; sources of material and criteria for evaluating material; illustrative units of current practice; differentiation to fit community and individual needs; and teacher and pupil bibliographies.

Approximately three hundred school systems have enrolled in the enterprise and are carrying on studies to assist in the preparation of the report. These range from places with 2500 population up to the largest cities. Besides these, a group of educational institutions including prominent teachers' colleges, departments of education, and also state and county departments of education are coöperating. The results will be published as the Fifth Yearbook of the Department of Superintendence and will be available in February, 1927.

CURRICULUM ACTIVITIES IN ST. LOUIS

One of the most thoroughgoing attempts at the reorganization of the courses of study in a large city that have so far been made was carried out in St. Louis during the past school year. Committees of principals representing the high schools, the intermediate schools, and the elementary schools first formulated tentatively the general aims of the school and the aims peculiar to the three principal divisions of it just named. These committees also proposed a program of activities and time allotment. Afterward 147 classroom teachers were relieved from teaching responsibilities in order that they might act as chairmen of producing committees. All such committees were composed of chairman and two other classroom teachers and thus comprised a total of 441 persons in active service. In addition to these, numerous principals, teachers, and supervisors were used to coöperate with each producing committee.

The reports of the various committees have been printed and are in the hands of the teaching corps for examination and trial in the classroom. They have also been submitted to educators outside of St. Louis for the same purpose. They will be revised in the light of criticisms received, and it is expected that the process of revision will go on continuously.

The following outline of the general aims of public education in St. Louis will illustrate the first steps taken by the curriculum committees:

General Aim of Public Education in St. Louis

To develop the individual to the end that he may effectively direct his life toward his own self-realization and toward his participation in the creation and realization of the ideals of society through training in:

A. Health and Physical Development.
   - I. Knowledge:
     1. Personal hygiene.
     2. Home hygiene.
     3. Public hygiene.
     4. Vocational hygiene.
   - II. Habits:
     1. Personal and public health.
     2. Safety first.
     3. Emotional poise.
   - III. Ideals:
     1. Convictions and enthusiasm concerning personal and public hygiene and health.
     2. The body beautiful.
   - IV. Appreciations:
     1. Desirability of good hygienic conditions from both practical and æsthetic standpoints.
     2. The importance of physical fitness for all of life's activities.

B. Discovery, Communication, and Expression.
   - I. Knowledge:
     1. Thought processes.
     2. Modes of communication and expression.
     3. Quantitative relationships.
     4. Methods of discovery.

II. Habits:
1. Reading.
2. Oral, written, graphic, rhythmic expression.
3. Skill in quantitative procedure.
4. Problem solving.
5. Skill in listening and observing.

III. Ideals:
Efficiency in discovery, communication, and expression.

IV. Appreciations:
Realization of the value of skill in discovery, communication and expression; admiration of creditable performance in these.

C. Worthy Home Membership.

I. Knowledge:
1. Those qualities which make the individual a worthy member of a family.
2. The home as a social institution; the relation to wider interests outside.
3. Unclassified practical activities.

II. Habits:
1. Observance of courtesy in family relations.
2. Assumption of home responsibilities in practicing household management, care of premises, preparing household budgets, etc.
3. Obedience to proper authority.
4. Living within one's means.

III. Ideals:
1. Exaltation of the home and family.
2. Desirable home relations; domestic cooperation, maintenance of family honor, etc.
3. The home beautiful.

IV. Appreciations:
1. The value of a well-appointed home.
2. The labor and skill required to maintain it.
3. The home as a fundamental institution.
4. The responsibility of each individual for the happiness of the home.

D. Vocation.

I. Knowledge:
1. Occupations and occupational conditions.
2. One or more specific occupations.
3. Self-knowledge necessary for an intelligent choice of occupation.

II. Habits:
1. Specific vocational skill.
2. Critical attitude in judging one's performance.
3. Completion of a job begun.

III. Ideals:
1. Honest work.
2. Craftsmanship.
3. Industry as social service.
4. Self-realization.
5. Development and improvement of one's vocation.

IV. Appreciations:
1. Relation of one's work to the world's work.
2. Right attitude toward associates.
3. Relative values to be found in the various vocations.
4. Finished performance.
5. Working conditions in one's own and in other occupations.
6. Rights and duties of the worker.

E. Worthy Citizenship.

I. Knowledge:
1. Social agencies and institutions.
2. Social conditions, both past and present.
3. Rights, duties, and privileges of a citizen.

II. Habits:
1. Active and intelligent citizenship.
2. Individual and group self-government and self-control.

III. Ideals:
1. Coöperation in and contribution to community welfare.
2. Wise leadership and discriminating followership.
3. Individual improvement and responsibility.

IV. Appreciations:
1. Dependence of the individual upon social organization.
2. Dependence of society upon the individual.
3. Interdependence of nations.
4. Value of loyalty to ideals of civic righteousness.

5. Active interest in community problems.
6. Our social heritage.

F. Worthy Use of Leisure.
  I. Knowledge:
    1. Wide range of means of wholesome enjoyment.
    2. Recreation.
    3. Sociability.
    4. Exercise.
    5. Self-improvement.
  II. Habits:
    1. Sociability.
    2. Hospitality.
    3. Self-improvement.
    4. Wholesome recreation.
    5. Self-expression through the arts.
  III. Ideals:
    1. Leisure as opportunity for activities beneficial to the individual, and not harmful to society.
    2. Leisure as opportunity for self-expression.
  IV. Appreciations:
    1. Importance of having leisure.
    2. Beneficial use of leisure.
    3. Importance of varied use of leisure.
    4. The beautiful in nature and art.

G. Ethical Character.
  I. Knowledge:
    1. Practical ethics.
    2. Sociological basis for ethics.
    3. Human nature.
  II. Habits:
    1. Thought and action consistent with the welfare of self and others.
    2. Search for the truth regardless of prejudice or emotional bias.
    3. Tolerance.
    4. Reverence.
  III. Ideals:
    1. Service.
    2. Sincerity to one's best self.
    3. Promotion of individual and social happiness.
    4. Honor.
    5. Trustworthiness.
    6. Sportsmanship.
    7. Exemplary personality.
  IV. Appreciations:
    1. Importance of personal and social idealism.
    2. Importance of altruism.
    3. Importance of respect of personality.
    4. Dynamic faith and optimism.

THE READER'S GUIDE

GRADED UNITS FOR TRAINING TEACHERS

Materials for the training of student teachers have been appreciably enriched by Dr. Pryor's "Graded Units."[1] The idea was developed in the normal school at Aberdeen, South Dakota, and consists essentially of phases of a teacher's work arranged as nearly as possible in the order of increasing difficulty. Each unit was arrived at by activity analysis and tried out under actual school conditions by experienced teachers.

Twenty-one units are presented at some length and three others in outline. Doubtless the application of these just as they stand would prove more or less mechanical. As samples to guide other workers in building up units of their own, they will no doubt find wide acceptation.

DIFFICULTIES IN SCHOOL HISTORY

The difficulties that children have in the study of history in the elementary school are due, in part at least, to causes that might easily be removed. This inference seems fair to make from the data gathered by Dr. Ayer in her testing of children who had attempted to read certain school histories.[2] "Literary embellishments, abstract thought, technical language, and long, involved sentences" are, she says, the most conspicuous obstacles to young readers of history textbooks.

Twenty-three histories widely used in the fifth grade were analyzed and selected paragraphs from them rewritten. Tests of comprehension were applied and through them it was learned that rewriting doubled the child's grasp of what he read.

Miss Ayers has evidently found a "lead." Her investigation should be greatly extended and the facts obtained for other subjects than history. Then an organized movement for a revision of school textbooks *downward* would surely follow.

A NOVEL INTELLIGENCE TEST

The testing of intelligence takes a new turn with the publication of Miss Goodenough's scale.[3] Drawing has, of course, played some part in tests hitherto devised, but it has never before been used as the single and only device for testing intelligence.

The new scale is intended for young children and does not involve the use of language except in listening to directions. It was evolved by examining thousands of children's drawings and relating these to age and grade so as to establish norms. As at present constituted, fifty-one points are included in the list to be considered, ranging in maturity from mere scribbling to correct profile.

The scale itself is issued as a separate publication at small cost, but should be accompanied by the author's book, in which she gives a full account of the derivation and use of the scale.

GOOD ADVICE FOR STUDENTS

Professor Fenton's guide to study[4] is intended for high school and college stu-

[1] *Graded Units in Student Teaching.* By Hugh C. Pryor. New York: Teachers College, 1926.
[2] *Some Difficulties in Elementary School History.* By Adelaide M. Ayer. New York: Teachers College, 1926.
[3] *Measurement of Intelligence by Drawings.* By Florence L. Goodenough. Yonkers, N. Y.: World Book Co., 1926.
[4] *Self-Direction and Adjustment.* By Norman Fenton. Yonkers, N. Y.: World Book Co., 1926.

dents. It combines the psychology of learning and of measurement with the results of observation and experience, and it reaches out more widely than books in this field have been accustomed to do. The last chapter is in effect a guide to self-analysis and study of one's capacities and possible career.

The book is packed with useful suggestions and should be read both by those who have the responsibility of educational guidance and by students themselves. In addition to admonitions as to the attitude necessary to good study, there will be found specific practical suggestions as to just what to do and how to do it. Directions as to how to improve one's silent reading and how to take notes may be cited as examples. Professor Terman, as editor, declares that the number of failures in high school would be greatly reduced if all freshmen were required to read this book. He might well urge the same conviction with regard to the college.

AN EXHAUSTIVE DISCUSSION OF METHOD

To read Professor Morrison's six hundred pages on method in secondary schools requires both time and effort.[5] The chapters are, however, the fruit of a rich and varied experience and reflect matured judgment.

As a matter of fact, the author has had in mind the upper years of the elementary school and the earlier years of college, though these are not commonly understood to be included in "secondary education." He would apply certain fundamental principles to teaching procedures throughout a ten-year period.

The treatment is wide-ranging, as the following main headings indicate: Fundamentals in the Teaching Process, Control Technique, Operative Technique, and Administration Technique. No radical reorganization is contemplated; the time-honored lesson and recitation are assumed throughout. After presenting in Parts One and Two the procedures deemed appropriate to all teaching, the writer passes on to discuss in detail the recognized subjects, though in somewhat novel combinations. Physical and social science, mathematics and grammar are coupled together.

As a whole, this book is in marked contrast to the majority of the new books on education. It takes little account of scientific investigations; it quotes few authorities; it does not condense, nor offer elaborate apparatus for study. It is the full and adequate statement of the convictions of a mature mind, and depends for its appeal on its own internal evidence of validity plus such standing and reputation as the author has achieved. Many will find it more grateful than the technical and statistical treatises that now so freely abound.

SIGNIFICANT ARTICLES

THE TEACHER AND SUPERVISION

In *Childhood Education* for October, Professor W. H. Burton, now at the University of Chicago, sums up in outline what the teacher has a right to expect from supervision. He finds four main qualities and contributions. First, a supervisor should have a well worked out plan or program for the year. This will include clearly stated objectives, an account of the methods to be used in attaining these objectives, and a set of criteria, checks, and tests by which progress in attaining the objectives may be measured. Second, teachers may expect certain definite forms of assistance in carrying out the plan, such as training in advance for new departures, provision of

[5] *The Practice of Teaching in the Secondary School.* By Henry C. Morrison. University of Chicago Press, 1926.

materials, and individual and special help on specific problems. Third, the teacher has a right to know the standards upon which she is being judged. These should be as objective as possible. Fourth, the teacher is entitled also to an attitude of kindly sympathy accompanied by reasonable firmness and decision.

MORE SPECIFIC TESTS OF READING

It is well known that what is called reading is made up of several abilities combined in different ways on different occasions. The reading tests so far provided are largely in the nature of blanket tests and do not serve the purpose of diagnosis of particular difficulties. Professor Gates reports in the *Teachers College Record* for September the preparation of a series of tests of reading ability in grades three to eight, which constitute a team or battery for diagnostic purposes.

The four tests are called, respectively, Reading to Appreciate the General Significance of a Paragraph, Reading to Predict the Outcome of Given Events, Reading to Understand Precise Directions, and Reading to Note Details.

The first of these requires six minutes to give, and each of the others, eight minutes. A series of companion tests has been devised for grades one and two. This series comprises three tests, namely, word recognition, phrase and sentence reading, and the reading of paragraphs of directions. These will be described in a later number of the *Record.*

THE EFFECT OF ATTITUDE ON READING

Further study of the influence of mental-set on behavior in reading has been made by Professor Good, who reports his results in the *Journal of Educational Research* for October. He refers to the work of Judd and Buswell and to that of Peterson, and describes in detail his own experiment with a freshman class in science in the high school. He administered each of five forms of the Thorndike-McCall Reading Scale under different conditions. Form III was used merely to establish confidence, Form IV to give encouragement and stimulate pupils as much as possible, Form V to induce skimming, Form VII to bring about discouragement, Form VI for the purpose of reproduction. Encouragement did not produce the exceptional results that were expected. Discouragement, on the other hand, led to a performance about a half-year below the average. Reproduction proved best of all. The author concludes that practice on the tests may in part account for the improved score obtained in the later phases of the experiment. On the whole, results seem to have been inconclusive.

THE MOVIES IN EDUCATION

In *Educational Review* for September, Miss Bernadine Freeman writes earnestly of the unfortunate influence of the movies upon young people. She thinks that eyesight is injured, that the rapid and jerky mechanical movement of the pictures on the screen produces a dangerous amount of nerve strain, that little or no intellectual stimulus is actually provided, and that the moral effect is almost certainly bad. The wrong is not made to appear wrong, nor right, right. The youthful "sheik" and "flapper" are made to seem the most desirable types. The writer quotes a striking list of titles to support her contentions and asks what the schools are going to do about it. She supposes that the movies may be reconstructed and become a constructive and efficacious influence, though she does not offer a plan for bringing this about.

WHAT TO TEACH IN ARITHMETIC

In the *Teachers Journal and Abstract* for September, Mr. J. D. Heilman brings

together in convenient summary what is at present known about elimination from the course of study in arithmetic. He quotes from such writers as Coffman, Jessup, Thorndike, and Smith, and offers tables to show what topics are recommended for omission, the relative frequencies of occurrence of topics to be retained in ordinary social life, and the vocabulary necessary, closing with a brief selected bibliography. Committees engaged in course of study making will find the article useful.

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Vacation on the Abilities of Fifth and Sixth Grade Children, by Margaret E. Noonan; pp. 103. No. 205, *The Administration and Cost of High School Interscholastic Athletics,* by Lewis H. Wagenhorst; pp. 134. No. 207, *State Control of Private Incorporated Institutions of Higher Education,* by Lester W. Barlett; pp. 95. No. 210, *The Philosophy of Helvetius,* by Mordecai Grossman; pp. 181. No. 211, *The Social-Ethical Significance of Vocabulary,* by Gladys C. Schwesinger; pp. 73. No. 212, *Some Difficulties in Elementary School History,* by Adelaide M. Ayer; pp. 70. No. 216, *The Effect of Time upon Variability,* by Ella Woodyard; pp. 56.

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HISTORICAL COSTUME PLATES By BELLE NORTHRUP and ANNA L. GREEN. Portfolio of 30 plates and manual. $1.50.

THE DECORATION AND FURNISHING OF HOMES. Study Material in Loose-Leaf Form. By RUTH ROBINSON TREGENZA. Portfolio of 28 plates and manual of directions. $2.50.

LOCOMOTION. Ten prints designed by the Lettering Class of 1925 under supervision of SALLIE B. TANNAHILL. $1.50.

BUREAU OF PUBLICATIONS
Teachers College
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Outline Chart *of* American History

A topical outline of the main events in the development of our institutions which should be covered in any course in the seventh and eighth grades. The chart shows in separate columns the development of our political institutions, the changes in our social and economic life, and the relation of events in other countries to our own history. The events in any given period are made evident.

This useful chart for the classroom will be sent free upon request. It is based upon *Robbins' School History of the American People*, the complete and well-proportioned content of which is evident from the value of this chart as a general outline.

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RATING ELEMENTARY SCHOOL COURSES OF STUDY

By Florence B. Stratemeyer and Herbert B. Bruner

This is the first of a series of reports of the Bureau of Curriculum Research and contains a report of the results secured from an evaluation of 9,000 elementary school courses of study in practically all fields of subject matter to determine outstanding present practice. This study, which utilized more than 35,000 judgments, presents (1) the guides employed by the judges in estimating the relative worth of courses of study; (2) the courses (in the various subject fields) selected as most nearly conforming to the judged best points of the criteria; (3) a preliminary report of trends and tendencies in elementary education as indicated by the selected courses.

This report, with its guides for judging curriculum merit and lists of outstanding courses, is replete with valuable suggestions that should be of immediate and genuine service to course of study committees in the field.

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